

Appendix C. Detailed Information for Each Watershed (11-Digit HUC) Assessment Unit

(331 pages)

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100001 020	Tenmile Creek; Ottawa River	147.0

Aquatic Life Use Assessment

Sampling Year(s): 1992, 1993, 1996, 2000

Sampling Site Size Distribution (mi2)

		<5	5-20	20-50	>50
Aquatic Life Use(s): WWH,MWH-C,LRW	# Sites Sampled:	12	8	3	12

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	17.7	16.7	65.6
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	30.5	69.5

AU Score
(relative amount of attainment)

Full	Partial	Non
0.09	0.24	0.67

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
13.2	35.3	98.5

High Magnitude Causes

Pesticides
Priority Organics
Thermal Modifications
Flow Alteration
Other Habitat Alterations

High Magnitude Sources

Minor Industrial Point Sources
Combined Sewer Overflow
Nonirrigated Crop Production
Land Development/Suburbanization
Landfills
Flow Reg./Mod. - Development
Removal of Riparian Vegetation - Dev
Streambank Destabilization - Dev
Contaminated Sediments

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other: A "Dermal Contact Advisory" is in effect for the Ottawa River due to PCBs contamination. The area under the advisory is from I-475 north of Wildwood Preserve in Toledo to the mouth at Maumee Bay.

Impairment? Yes

Fish Consumption Assessment

A "Do Not Eat" Fish Consumption Advisory is in effect for the Ottawa River (all species) due to PCBs contamination. The area under the advisory is from I-475 north of Wildwood Preserve in Toledo to the mouth at Maumee Bay. Additionally, a "One Meal per Week" advisory is in effect (Channel Catfish) for the entire length of the river.

Integrated Report Assessment Category: 5 Priority: 9 Scheduled Monitoring: 2011

Significant remediation of problematic sites (including closed landfills) in the lower Ottawa River watershed are actively underway. Site specific monitoring is occurring in the remediated areas on a regular basis. Future monitoring within the entire watershed will be conducted within the normal rotating basin schedule after the cessation of these projects and when sufficient recovery time has elapsed.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100002 030	Bear Creek (River Raisin basin)	26.5

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0
<u>High Magnitude Causes</u>			<u>High Magnitude Sources</u>		

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
>5000 colonies/100 ml. fecal coliform bacteria:
>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 **Priority:** **Scheduled Monitoring: 2011**
This small basin has never been sampled for biological quality. All data (chemical only) are from the 1980's.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100003 010	East Branch St. Joseph River	25.2

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled: 0	0	0	0
Impairment? Unknown				
	% Attainment			
	Full	Partial	Non	
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0	
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0	

AU Score (relative amount of attainment)		
Full	Partial	Non
0.00	0.00	0.00

High Magnitude Causes

Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non
0.0	0.0	0.0

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
 >5000 colonies/100 ml. fecal coliform bacteria:
 >576 colonies/100 ml. E. coli bacteria:
 # Sites in AU w/ Bacteria Violations:
 Total # Bacteria Sites in AU: 0
 Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 **Priority:** **Scheduled Monitoring: 2011**

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100003 020	West Branch St. Joseph River	14.9

Aquatic Life Use Assessment

Sampling Year(s): 1992, 1999

		Sampling Site Size Distribution (mi2)			
		<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled:	0	0	0	3

Impairment? No

		% Attainment		
		Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):		0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):		100.0	0.0	0.0

AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
1.00	0.00	0.00	14.9	0.0	0.0
<u>High Magnitude Causes</u>			<u>High Magnitude Sources</u>		

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

A "One Meal per Week" Fish Consumption Advisory is in effect for the West Branch St. Joseph River (all species). The area under the advisory includes the entire length of the river.

Integrated Report Assessment Category: 2

Priority:

Scheduled Monitoring: 2011

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100003 030	St. Joseph River (East/West Branches to downstream Bear Creek)	123.5

Aquatic Life Use Assessment

Sampling Year(s): 1991, 1992, 1997

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH,MWH-C,LRW	1	1	2	4

Impairment? Yes

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	75.0	25.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	100.0	0.0

AU Score (relative amount of attainment)

Full	Partial	Non
0.38	0.62	0.00

Weighted AU Score (relative amount of attainment weighted by AU size)

Full	Partial	Non
46.3	77.2	0.0

High Magnitude Causes

Other Habitat Alterations

High Magnitude Sources

Nonirrigated Crop Production
Channelization - Agriculture

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for the St. Joseph River (Channel Catfish). The area under the advisory includes the entire length of the river.

Integrated Report Assessment Category: 5 Priority: 3 Scheduled Monitoring: 2011

The last major Ohio EPA survey within this watershed was done in 1992.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100003 050	Fish Creek	16.8

Aquatic Life Use Assessment

Sampling Year(s): 1991-1994, 1997

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH				
# Sites Sampled:	0	1	0	2

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	100.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	50.0	50.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.00	0.75	0.25

High Magnitude Causes

Siltation

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.0	12.6	4.2

High Magnitude Sources

Nonirrigated Crop Production

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 2 Scheduled Monitoring: 2011

Extensive monitoring has been conducted since 1991 following a major spill and fish kill originating in Indiana.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100003 060	St. Joseph River (downstream Bear Creek to downstream Sol Shank Ditch [IN]; excluding Fish Creek)	58.4

Aquatic Life Use Assessment

Sampling Year(s): 1992, 1996

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	0	0	0	5

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	100.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.00	1.00	0.00

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.0	58.4	0.0

High Magnitude Causes

Other Habitat Alterations

High Magnitude Sources

Nonirrigated Crop Production
Channelization - Agriculture

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for the St. Joseph River (Channel Catfish). The area under the advisory includes the entire length of the river.

Integrated Report Assessment Category: 5 Priority: 3 Scheduled Monitoring: 2011

The last major Ohio EPA survey within this watershed was done in 1992.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100004 010	St. Mary's River (headwaters to downstream Sixmile Creek)	134.3

Aquatic Life Use Assessment

Sampling Year(s): 1991

Sampling Year(s): 1991		Sampling Site Size Distribution (mi2)			
		<5	5-20	20-50	>50
Aquatic Life Use(s): WWH,MWH-C,LRW	# Sites Sampled:	0	1	0	6

Impairment? Yes

		% Attainment		
		Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):		0.0	0.0	100.0
Large Streams/Rivers (sites w/>50 mi2 drainage):		0.0	0.0	100.0

AU Score (relative amount of attainment)		
Full	Partial	Non
0.00	0.00	1.00

Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non
0.0	0.0	134.3

High Magnitude Causes

Flow Alteration
Other Habitat Alterations

High Magnitude Sources

Channelization - Agriculture
Natural

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 2

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 2

Total # Bacteria Sites in AU: 2

Other:

Impairment? Indeterminate

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for the St. Mary's River (Freshwater Drum, Northern Pike, Saugeye). The area under the advisory includes the entire length of the river.

Integrated Report Assessment Category: 5 Priority: 2 Scheduled Monitoring: 2010

Biological data from the St. Marys River mainstem are all from 1991 and earlier. Fish tissue and sediment data were collected between 1995-1999. The only recent biological data in this watershed are from one reference site (Carter Creek) in 1999.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100004 020	St. Mary's River (downstream Sixmile Creek to downstream Twelvemile Creek)	117.0

Aquatic Life Use Assessment

Sampling Year(s): 1991, 1999

Sampling Site Size Distribution (mi2)

		<5	5-20	20-50	>50
Aquatic Life Use(s): WWH,MWH-C,LRW	# Sites Sampled:	0	2	1	2

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	100.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	47.1	52.9

AU Score
(relative amount of attainment)

Full	Partial	Non
0.00	0.23	0.77

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.0	27.6	89.4

High Magnitude Causes

Siltation
Other Habitat Alterations

High Magnitude Sources

Nonirrigated Crop Production
Channelization - Agriculture

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for the St. Mary's River (Freshwater Drum, Northern Pike, Saugeye). The area under the advisory includes the entire length of the river.

Integrated Report Assessment Category: 5 Priority: 2 Scheduled Monitoring: 2010

Biological data from the St. Marys River mainstem are all from 1991 and earlier. Recent fish tissue and sediment data were collected between 1995-1999. The only recent biological data in the watershed are from one reference site (Twelvemile Creek) in 1996/1999.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100004 030	St. Mary's River (downstream Twelvemile Creek to upstream Twentyseven Mile Creek [IN])	161.1

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH,MWH-C	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0
<u>High Magnitude Causes</u>			<u>High Magnitude Sources</u>		

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for the St. Mary's River (Freshwater Drum, Northern Pike, Saugeye). The area under the advisory includes the entire length of the river.

Integrated Report Assessment Category: 3

Priority:

Scheduled Monitoring: 2010

Biological data from the St. Marys River mainstem are all from 1991 and earlier. Recent fish tissue and sediment data were collected between 1995-1999.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100004 040	St. Mary's River (upstream Twentyseven Mile Creek [IN] to upstream Holthouse Ditch [IN])	26.0

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.00	0.00	0.00

High Magnitude Causes

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.0	0.0	0.0

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3

Priority:

Scheduled Monitoring: 2010

This small basin has never been sampled for biological quality. Only habitat data (QHEI) were done associated with a 401 application.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100005 020	Maumee River (downstream Hamm Ditch [IN] to upstream Tiffin River); excluding Maumee River mainstem	190.1

Aquatic Life Use Assessment

Sampling Year(s): 1997

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): WWH,MWH-C

# Sites Sampled:	<5	5-20	20-50	>50
	1	5	2	0

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	55.0	10.0	35.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.55	0.10	0.35

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
104.6	19.0	66.5

High Magnitude Causes

Unionized Ammonia
Siltation
Flow Alteration
Other Habitat Alterations

High Magnitude Sources

Minor Municipal Point Source
Nonirrigated Crop Production
Channelization - Agriculture
Removal of Riparian Vegetation - Ag.
Streambank Destabilization - Ag.

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 7

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 7

Total # Bacteria Sites in AU: 8

Other:

Impairment? Yes

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 10

Scheduled Monitoring: 2010

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100006 020	Bean Creek (downstream Lime Creek (Michigan) to downstream Mill Creek)	105.3

Aquatic Life Use Assessment

Sampling Year(s): 1992, 1997

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): WWH,MWH-C

Sites Sampled:

<5	5-20	20-50	>50
0	2	4	2

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	37.5	62.5
Large Streams/Rivers (sites w/>50 mi2 drainage):	100.0	0.0	0.0

AU Score (relative amount of attainment)

Full	Partial	Non
0.50	0.19	0.31

Weighted AU Score (relative amount of attainment weighted by AU size)

Full	Partial	Non
52.6	19.8	32.9

High Magnitude Causes

Unknown Toxicity
Nutrients
Siltation
Organic Enrichment/DO
Other Habitat Alterations

High Magnitude Sources

Minor Municipal Point Source
Combined Sewer Overflows
Nonirrigated Crop Production
Feedlots (Confined Animal Feeding Oper.)
Channelization - Ag.
Removal of Riparian Vegetation - Ag.
Spills

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 0

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 0

Total # Bacteria Sites in AU: 5

Other:

Impairment? Indeterminate

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 3

Scheduled Monitoring: 2006

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100006 030	Tiffin River (downstream Mill Creek to downstream Leatherwood Creek)	79.9

Aquatic Life Use Assessment

Sampling Year(s): 1992, 1997

	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled: 1	3	0	4

Impairment? Yes

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	33.3	0.0	66.7
Large Streams/Rivers (sites w/>50 mi2 drainage):	50.0	50.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.42	0.25	0.33

High Magnitude Causes

Siltation
Flow Alteration

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
33.1	20.0	26.8

High Magnitude Sources

Nonirrigated Crop Production

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 1

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 1

Total # Bacteria Sites in AU: 2

Other:

Impairment? Indeterminate

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for the Tiffin River (Northern Pike, Smallmouth Bass). The area under the advisory includes the entire length of the river.

Integrated Report Assessment Category: 5 Priority: 4 Scheduled Monitoring: 2006

All biological data collected in 1997 were from tributaries within the watershed. The Tiffin River mainstem has not been sampled since 1992, with the exception of fish tissue sampling done in 1997.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100006 040	Tiffin River (downstream Leatherwood Creek to upstream Lick Creek); excluding Tiffin River mainstem	166.2

Aquatic Life Use Assessment

Sampling Year(s): 1997

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): WWH

Sites Sampled:

<5	5-20	20-50	>50
0	2	6	3

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	25.0	16.5	58.5
Large Streams/Rivers (sites w/>50 mi2 drainage):	22.3	42.5	35.2

AU Score
(relative amount of attainment)

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.24	0.29	0.47

Full	Partial	Non
39.9	48.2	78.1

High Magnitude Causes

Cause Unknown
Siltation
Organic Enrichment/DO
Other Habitat Alterations

High Magnitude Sources

Major Industrial Point Source
Minor Municipal Point Source
Nonirrigated Crop Production
Flow Regulation/Modification - Ag.
Removal of Riparian Vegetation - Ag.
Source Unknown

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 5

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 4

Total # Bacteria Sites in AU: 10

Other:

Impairment? Yes

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 8

Scheduled Monitoring: 2006

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100006 050	Lick Creek	105.9

Aquatic Life Use Assessment

Sampling Year(s): 1997

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH,MWH-C				
# Sites Sampled:	3	6	5	3

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	45.0	20.0	35.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	83.8	16.2

AU Score
(relative amount of attainment)

Full	Partial	Non
0.22	0.52	0.26

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
23.8	55.0	27.1

High Magnitude Causes

Nutrients
Siltation
Organic Enrichment/DO
Other Habitat Alterations

High Magnitude Sources

Major Municipal Point Source
Combined Sewer Overflow
Nonirrigated Crop Production
Range Grazing - Riparian
Urban Runoff/Storm Sewers (NPS)
Other Urban Runoff
Dredging - Development

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 11

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 7

Total # Bacteria Sites in AU: 12

Other:

Impairment? Yes

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 9

Scheduled Monitoring: 2006

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100006 060	Tiffin River (downstream Lick Creek to mouth); excluding Tiffin River mainstem	100.4

Aquatic Life Use Assessment

Sampling Year(s): 1997

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): WWH

	<5	5-20	20-50	>50
# Sites Sampled:	0	2	3	0

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	41.5	0.0	58.5
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.42	0.00	0.58

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
41.7	0.0	58.7

High Magnitude Causes

Siltation
Other Habitat Alterations

High Magnitude Sources

Nonirrigated Crop Production
Channelization - Agriculture
Flow Regulation/Modification - Ag.

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 0

Total # Bacteria Sites in AU: 2

Other:

Impairment? Indeterminate

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 3

Scheduled Monitoring: 2006

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100007 010	Auglaize River (headwaters to downstream Pusheta Creek)	148.2

Aquatic Life Use Assessment

Sampling Year(s): 2000

	# Sites Sampled:	Sampling Site Size Distribution (mi2)			
		<5	5-20	20-50	>50
Aquatic Life Use(s): WWH		9	15	5	5

Impairment? Yes

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	92.8	5.5	1.7
Large Streams/Rivers (sites w/>50 mi2 drainage):	95.6	4.4	0.0

AU Score (relative amount of attainment)		
Full	Partial	Non
0.94	0.05	0.01

Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non
139.6	7.3	1.3

High Magnitude Causes

Cause Unknown
Unknown Toxicity
Nutrients
Siltation
Organic Enrichment/DO
Other Habitat Alterations

High Magnitude Sources

Combined Sewer Overflows
Domestic Wastewater Lagoon
Nonirrigated Crop Production
Urban Runoff/Storm Sewers (NPS)
Upstream Impoundment
Source Unknown

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
>5000 colonies/100 ml. fecal coliform bacteria: 18

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 13

Total # Bacteria Sites in AU: 36

Other:

Impairment? Yes

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for the Auglaize River (Freshwater Drum, Smallmouth Bass). The area under the advisory is from U.S. Rt. 33 in Wapakoneta to the mouth at Defiance. Additionally, A "One Meal per Week" advisory is in effect (Channel Catfish, Carp) for the same stretch of the river.

Integrated Report Assessment Category: 5 Priority: 11 Scheduled Monitoring: 2010

A TMDL is in progress for the upper Auglaize River basin. Sampling was conducted in 2000.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100007 020	Auglaize River (downstream Pusheta Creek to upstream Jennings Creek); excluding Auglaize R. mainstem	99.9

Aquatic Life Use Assessment

Sampling Year(s): 1994, 2000

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): WWH,LRW

Sites Sampled:

<5	5-20	20-50	>50
6	5	2	8

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	13.3	60.0	26.7
Large Streams/Rivers (sites w/>50 mi2 drainage):	100.0	0.0	0.0

AU Score (relative amount of attainment)		
Full	Partial	Non
0.57	0.30	0.13

Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non
56.6	30.0	13.3

High Magnitude Causes

Cause Unknown
Unknown Toxicity
Nutrients
Siltation
Organic Enrichment/DO
Flow Alteration
Other Habitat Alterations

High Magnitude Sources

Industrial Point Source
Minor Municipal Point Source
Nonirrigated Crop Production
Channelization - Agriculture
Source Unknown

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 7

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 5

Total # Bacteria Sites in AU: 25

Other:

Impairment? Yes

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 11 Scheduled Monitoring: 2010

A TMDL is in progress for the upper Auglaize River basin. Sampling was conducted in 2000.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100007 030	Ottawa River (headwaters to upstream Little Ottawa River)	134.3

Aquatic Life Use Assessment

Sampling Year(s): 1991, 1996

Aquatic Life Use(s): WWH,MWH-C	# Sites Sampled:	Sampling Site Size Distribution (mi2)			
		<5	5-20	20-50	>50
		1	1	1	19

Impairment? Yes

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	50.0	0.0	50.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	42.8	28.6	28.6

AU Score
(relative amount of attainment)

Full	Partial	Non
0.47	0.14	0.39

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
62.3	19.2	52.8

High Magnitude Causes

Priority Organics
Unionized Ammonia
Organic Enrichment/DO

High Magnitude Sources

Industrial Point Source
Municipal Point Source
Combined Sewer Overflow
Urban Runoff/Storm Sewers (NPS)

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 0

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 0

Total # Bacteria Sites in AU: 13

Other:

Impairment? Indeterminate

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 3

Scheduled Monitoring: 2005

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100007 040	Ottawa River (upstream Little Ottawa River to upstream Sugar Creek)	106.1

Aquatic Life Use Assessment

Sampling Year(s): 1996

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH,MWH-C				
# Sites Sampled:	2	4	0	11

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	50.0	50.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	4.9	41.1	54.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.03	0.45	0.52

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
2.6	48.3	55.2

High Magnitude Causes

Unknown Toxicity
Nutrients
Organic Enrichment/DO
Other Habitat Alterations
Pathogens

High Magnitude Sources

Industrial Point Source
Municipal Point Source
Combined Sewer Overflows
Urban Runoff/Storm Sewers (NPS)
Channelization - Agriculture

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 8

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 5

Total # Bacteria Sites in AU: 18

Other:

Impairment? Yes

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 8

Scheduled Monitoring: 2005

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100007 050	Ottawa River (upstream Sugar Creek to mouth)	124.7

Aquatic Life Use Assessment

Sampling Year(s): 1996, 1997

		Sampling Site Size Distribution (mi2)			
		<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled:	0	0	6	4

Impairment? Yes

		% Attainment		
		Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):		0.0	16.7	83.3
Large Streams/Rivers (sites w/>50 mi2 drainage):		70.3	29.7	0.0

AU Score (relative amount of attainment)		
Full	Partial	Non
0.35	0.23	0.42

Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non
43.8	28.9	52.0

High Magnitude Causes

Unionized Ammonia
Organic Enrichment/DO
Other Habitat Alterations
Pathogens

High Magnitude Sources

Combined Sewer Overflows
Channelization - Agriculture

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
>5000 colonies/100 ml. fecal coliform bacteria: 4

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 3

Total # Bacteria Sites in AU: 7

Other:

Impairment? Indeterminate

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 1

Scheduled Monitoring: 2005

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100007 060	Auglaize River (upstream Jennings Cr. to upstream L. Auglaize R.); excluding Auglaize R. mainstem	143.0

Aquatic Life Use Assessment

Sampling Year(s): 2000

Sampling Site Size Distribution (mi2)

		<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled:	3	9	3	3

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	61.1	0.0	38.9
Large Streams/Rivers (sites w/>50 mi2 drainage):	100.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.81	0.00	0.19

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
115.3	0.0	27.7

High Magnitude Causes

Unionized Ammonia
Nutrients
Siltation
Organic Enrichment/DO
Flow Alteration
Other Habitat Alterations

High Magnitude Sources

Minor Municipal Point Source
Nonirrigated Crop Production
Channelization - Agriculture

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 16

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 11

Total # Bacteria Sites in AU: 33

Other:

Impairment? Yes

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 9 Scheduled Monitoring: 2010

A TMDL is in progress for the upper Auglaize River basin. Sampling was conducted in 2000.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100007 070	Little Auglaize River (headwaters to upstream Dog Creek)	124.0

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)					
	<5	5-20	20-50	>50		
Aquatic Life Use(s): MWH-C,LRW	# Sites Sampled: 0	0	0	0		
Impairment? Unknown	% Attainment					
	Full	Partial	Non			
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0			
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0			
AU Score (relative amount of attainment)	Weighted AU Score (relative amount of attainment weighted by AU size)					
Full	Partial	Non		Full	Partial	Non
0.00	0.00	0.00		0.0	0.0	0.0
High Magnitude Causes	High Magnitude Sources					

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
 >5000 colonies/100 ml. fecal coliform bacteria:
 >576 colonies/100 ml. E. coli bacteria):
 # Sites in AU w/ Bacteria Violations:
 Total # Bacteria Sites in AU: 0
 Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 Priority: Scheduled Monitoring: 2010

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment. The vast majority of the data are from 1983. Only reference sites have been sampled since then.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100007 080	Prairie Creek	106.2

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)					
	<5	5-20	20-50	>50		
Aquatic Life Use(s): MWH-C	# Sites Sampled: 0	0	0	0		
Impairment? Unknown	% Attainment					
	Full	Partial	Non			
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0			
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0			
AU Score (relative amount of attainment)	Weighted AU Score (relative amount of attainment weighted by AU size)					
Full	Partial	Non		Full	Partial	Non
0.00	0.00	0.00		0.0	0.0	0.0
High Magnitude Causes	High Magnitude Sources					

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
 >5000 colonies/100 ml. fecal coliform bacteria:
 >576 colonies/100 ml. E. coli bacteria):
 # Sites in AU w/ Bacteria Violations: 0
 Total # Bacteria Sites in AU: 1
 Other:

Impairment? Indeterminate

Fish Consumption Assessment

Integrated Report Assessment Category: 3 **Priority:** **Scheduled Monitoring: 2010**

The vast majority of the data in this watershed are from 1983. Only one site (biological reference site on Prairie Creek) has been sampled since then. Prairie Creek is currently listed on the 303(d) list, but data from 1983 are not adequate to justify keeping it on the list. Another survey of the stream is needed to reassess the status.

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
04100007 090	Little Auglaize River (upstream Dog Creek to mouth; excluding Prairie Creek)	175.0

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): MWH-C	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0
<u>High Magnitude Causes</u>			<u>High Magnitude Sources</u>		

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
 >5000 colonies/100 ml. fecal coliform bacteria:
 >576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 Priority: Scheduled Monitoring: 2010

The vast majority of the data in this watershed are from 1983. Only one site (biological reference site on Little Auglaize River) has been sampled since then. Dog Creek and Little Auglaize River are currently listed on the 303(d) list, but data from 1983 are not adequate to justify keeping them on the list. Another survey of these streams is needed to reassess the status.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100007 100	Auglaize River (downstream L. Auglaize R. to upstream Flatrock Cr.); excluding Auglaize R. mainstem	130.4

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH,MWH-C	# Sites Sampled: 0	0	0	0
Impairment? Unknown				
	% Attainment			
	Full	Partial	Non	
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0	
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0	
AU Score		Weighted AU Score		
(relative amount of attainment)		(relative amount of attainment weighted by AU size)		
Full	Partial	Non		
0.00	0.00	0.00		
High Magnitude Causes		High Magnitude Sources		

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
 >5000 colonies/100 ml. fecal coliform bacteria:
 >576 colonies/100 ml. E. coli bacteria):
 # Sites in AU w/ Bacteria Violations:
 Total # Bacteria Sites in AU: 0
 Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 Priority: Scheduled Monitoring: 2010

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment. Most of the data collected are from one reference site on Blue Creek.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100007 110	Powell Creek	97.6

Aquatic Life Use Assessment

Sampling Year(s): 1997, 1999, 2000

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): WWM,LRW

Sites Sampled:

<5	5-20	20-50	>50
2	1	4	2

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	62.5	0.0	37.5
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	100.0

AU Score
(relative amount of attainment)

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.31	0.00	0.69

Full	Partial	Non
30.5	0.0	67.1

High Magnitude Causes

Nutrients
Siltation
Organic Enrichment/DO
Flow Alteration
Other Habitat Alterations

High Magnitude Sources

Nonirrigated Crop Production
Hydromodification - Agriculture

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 1

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 1

Total # Bacteria Sites in AU: 11

Other:

Impairment? Indeterminate

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 1 Scheduled Monitoring: 2010

A TMDL is in progress for the upper Auglaize River basin. Sampling was done in 2000.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100007 120	Auglaize River (Flatrock Creek to mouth); excluding Powell Creek and Auglaize R. mainstem	178.7

Aquatic Life Use Assessment

Sampling Year(s): 1991, 1996

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH,MWH-C	0	0	0	9

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	7.3	68.2	24.5

AU Score
(relative amount of attainment)

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.07	0.68	0.25

Full	Partial	Non
13.0	121.9	43.8

High Magnitude Causes

Siltation
Other Habitat Alterations

High Magnitude Sources

Nonirrigated Crop Production
Channelization - Agriculture

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 2 Scheduled Monitoring: 2010

Most of the data in this watershed are from Flatrock Creek, sampled in 1991.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100008 010	Blanchard River (headwaters to downstream Potato Run)	140.8

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0
<u>High Magnitude Causes</u>			<u>High Magnitude Sources</u>		

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 Priority: Scheduled Monitoring: 2005

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment. The last major Ohio EPA survey was done in 1989. Only a few reference sites on the Blanchard River mainstem have been sampled since then.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100008 020	Blanchard River (downstream Potato Run to upstream Eagle Creek)	133.4

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)					
	<5	5-20	20-50	>50		
Aquatic Life Use(s): WWH	# Sites Sampled: 0	0	0	0		
Impairment? Unknown	% Attainment					
	Full	Partial	Non			
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0			
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0			
AU Score (relative amount of attainment)	Weighted AU Score (relative amount of attainment weighted by AU size)					
Full	Partial	Non		Full	Partial	Non
0.00	0.00	0.00		0.0	0.0	0.0
High Magnitude Causes	High Magnitude Sources					

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
 >5000 colonies/100 ml. fecal coliform bacteria:
 >576 colonies/100 ml. E. coli bacteria):
 # Sites in AU w/ Bacteria Violations:
 Total # Bacteria Sites in AU: 0
 Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 Priority: Scheduled Monitoring: 2005

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment. The last major Ohio EPA survey was done in 1989. Only a few reference sites on the Blanchard River mainstem have been sampled since then.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100008 030	Blanchard River (upstream Eagle Creek to upstream Ottawa Creek)	115.0

Aquatic Life Use Assessment

Sampling Year(s): 1991, 1996

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH,LRW	0	0	1	7

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	100.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	34.7	65.3	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.17	0.33	0.50

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
20.0	37.5	57.5

High Magnitude Causes

Cause Unknown
Nutrients
Flow Alteration
Other Habitat Alterations

High Magnitude Sources

Major Municipal Point Source
Channelization - Development
Dam Construction - Development
Source Unknown

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 1 Scheduled Monitoring: 2005

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment. The last major Ohio EPA survey was done in 1989. Only a few reference sites on the Blanchard River mainstem and Eagle Creek have been sampled since then.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100008 040	Blanchard River (upstream Ottawa Creek to upstream Riley Creek); excluding Blanchard R.	148.9

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH,MWH-C,LRW	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)		
Full	Partial	Non
0.00	0.00	0.00

High Magnitude Causes

Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non
0.0	0.0	0.0

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 Priority: Scheduled Monitoring: 2005

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100008 050	Riley Creek	85.6

Aquatic Life Use Assessment

Sampling Year(s): 1991

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): WWH

# Sites Sampled:	<5	5-20	20-50	>50
	0	2	2	6

Impairment? Yes

% Attainment

Small Streams (sites w/<50 mi2 drainage):

Full	Partial	Non
------	---------	-----

Large Streams/Rivers (sites w/>50 mi2 drainage):

0.0	0.0	100.0
-----	-----	-------

29.5	32.7	37.8
------	------	------

AU Score
(relative amount of attainment)

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
------	---------	-----

Full	Partial	Non
------	---------	-----

0.15	0.16	0.69
------	------	------

12.7	13.9	59.0
------	------	------

High Magnitude Causes

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 1

Scheduled Monitoring: 2005

Riley Creek has not been sampled since 1991.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100008 060	Blanchard River (downstream Riley Creek to mouth); excluding Blanchard R. mainstem	147.3

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)				
	<5	5-20	20-50	>50	
Aquatic Life Use(s): WWH,LRW	# Sites Sampled:	0	0	0	0
Impairment? Unknown	% Attainment				
	Full	Partial	Non		
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0		
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0		
AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0
High Magnitude Causes			High Magnitude Sources		

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
 >5000 colonies/100 ml. fecal coliform bacteria:
 >576 colonies/100 ml. E. coli bacteria):
 # Sites in AU w/ Bacteria Violations:
 Total # Bacteria Sites in AU: 0
 Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 Priority: Scheduled Monitoring: 2005

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment. The last major survey done by the Ohio EPA in this watershed was in 1989.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100009 010	Maumee River (downstream Tiffin R. to upstream South Turkeyfoot Cr.); excluding Maumee R. mainstem	170.0

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH,MWH-C	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0
<u>High Magnitude Causes</u>			<u>High Magnitude Sources</u>		

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 Priority: Scheduled Monitoring: 2011

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100009 020	South Turkeyfoot Creek	149.1

Aquatic Life Use Assessment

Sampling Year(s): 1997

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): WWH

Sites Sampled:

<5	5-20	20-50	>50
0	4	1	3

Impairment? Yes

% Attainment

Small Streams (sites w/<50 mi2 drainage):

Large Streams/Rivers (sites w/>50 mi2 drainage):

Full	Partial	Non
0.0	37.5	62.5
24.4	26.8	48.8

AU Score
(relative amount of attainment)

Full	Partial	Non
0.12	0.32	0.56

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
18.2	47.9	83.0

High Magnitude Causes

Siltation
Flow Alteration
Other Habitat Alterations

High Magnitude Sources

Nonirrigated Crop Production
Channelization - Agriculture
Removal of Riparian Vegetation - Ag.
Streambank Destabilization - Ag.

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 8

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 5

Total # Bacteria Sites in AU: 8

Other:

Impairment? Yes

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 8

Scheduled Monitoring: 2011

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100009 030	Maumee R. (downstream S. Turkeyfoot Cr. to upstream Bad Cr.); excluding Maumee 103.0 R.	

Aquatic Life Use Assessment

Sampling Year(s): 1997

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH,MWH-C,LRW				
# Sites Sampled:	0	3	2	1

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	66.7	16.7	16.6
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score
(relative amount of attainment)

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.67	0.17	0.16

Full	Partial	Non
68.7	17.2	17.1

High Magnitude Causes

Siltation
Flow Alterations
Other Habitat Alterations

High Magnitude Sources

Nonirrigated Crop Production
Channelization - Agriculture
Streambank Destabilization - Ag.

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 6

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 4

Total # Bacteria Sites in AU: 7

Other:

Impairment? Yes

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 10

Scheduled Monitoring: 2011

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100009 040	Bad Creek	64.7

Aquatic Life Use Assessment

Sampling Year(s): 1997

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH				
# Sites Sampled:	0	1	3	3

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	100.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	78.4	21.6

AU Score
(relative amount of attainment)

Full	Partial	Non
0.00	0.39	0.61

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.0	25.4	39.3

High Magnitude Causes

Unionized Ammonia
Siltation
Organic Enrichment/DO
Flow Alteration
Other Habitat Alterations

High Magnitude Sources

Municipal Point Source
Combined Sewer Overflows
Nonirigated Crop Production
Channelization - Agriculture
Removal of Riparian Vegetation - Ag.
Streambank Destabilization - Ag.

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 3

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 3

Total # Bacteria Sites in AU: 9

Other:

Impairment? Indeterminate

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 1

Scheduled Monitoring: 2011

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100009 050	Maumee River (downstream Bad Creek to downstream Beaver Creek); excluding Maumee R. mainstem	231.2

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH,MWH-C,LRW	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)		
Full	Partial	Non
0.00	0.00	0.00

Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non
0.0	0.0	0.0

High Magnitude Causes

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 0

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 0

Total # Bacteria Sites in AU: 3

Other:

Impairment? Indeterminate

Fish Consumption Assessment

Integrated Report Assessment Category: 3 Priority: Scheduled Monitoring: 2011

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100009 060	Maumee River (downstream Beaver Cr. to downstream N. Granger Island); excluding Maumee R. mainstem	83.7

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled: 0	0	0	0
Impairment? Unknown	% Attainment			
	Full	Partial	Non	
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0	
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0	

AU Score (relative amount of attainment)		
Full	Partial	Non
0.00	0.00	0.00

High Magnitude Causes

Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non
0.0	0.0	0.0

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
 >5000 colonies/100 ml. fecal coliform bacteria:
 >576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3

Priority:

Scheduled Monitoring: 2011

No recent data have been collected in this watershed.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100009 070	Swan Creek (headwaters to upstream Blue Creek)	95.7

Aquatic Life Use Assessment

Sampling Year(s):

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): WWH

Sites Sampled:

<5	5-20	20-50	>50
0	0	0	0

Impairment? Unknown

% Attainment

Small Streams (sites w/<50 mi2 drainage):

Large Streams/Rivers (sites w/>50 mi2 drainage):

Full	Partial	Non
0.0	0.0	0.0
0.0	0.0	0.0

AU Score
(relative amount of attainment)

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.00	0.00	0.00

Full	Partial	Non
0.0	0.0	0.0

High Magnitude Causes

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3

Priority:

Scheduled Monitoring: 2011

The upper portion of Swan Creek was sampled in 1989. Swan Creek is currently listed on the 303(d) list, but data from 1989 are not adequate to justify keeping it on the list. Another survey of the stream is needed to reassess the status.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100009 080	Swan Creek (upstream Blue Creek to mouth)	108.3

Aquatic Life Use Assessment

Sampling Year(s): 1992, 1993

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): WWH,MWH-C,LRW

Sites Sampled:

<5	5-20	20-50	>50
0	0	2	8

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	50.0	50.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	19.9	58.4	21.7

AU Score
(relative amount of attainment)

Full	Partial	Non
0.10	0.54	0.36

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
10.8	58.7	38.8

High Magnitude Causes

Siltation
Other Habitat Alterations
Total Toxics

High Magnitude Sources

Urban Runoff/Storm Sewers (NPS)

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 1 Scheduled Monitoring: 2011

The lower portion of the Swan Creek watershed was sampled in 1992 and 1993 as part of the Maumee AOC.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100009 090	Maumee River (downstream N. Granger Island to mouth); excluding Maumee R. mainstem	76.6

Aquatic Life Use Assessment

Sampling Year(s): 1993, 1997, 1998

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): WWH

Sites Sampled:

<5	5-20	20-50	>50
4	0	2	0

Impairment? Yes

% Attainment

Small Streams (sites w/<50 mi2 drainage):

Large Streams/Rivers (sites w/>50 mi2 drainage):

Full	Partial	Non
25.0	0.0	75.0
0.0	0.0	0.0

AU Score

(relative amount of attainment)

Full	Partial	Non
0.25	0.00	0.75

Weighted AU Score

(relative amount of attainment weighted by AU size)

Full	Partial	Non
19.2	0.0	57.4

High Magnitude Causes

Siltation

Other Habitat Alterations

High Magnitude Sources

Channelization - Development

Habitat Modifications o/than Hydromod.

Streambank Destabilization - Dev.

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 1

Scheduled Monitoring: 2011

Streams within this watershed were sampled as part of the Maumee AOC.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100010 010	Lake Erie tributaries (East of Maumee River to west of Toussaint River)	204.7

Aquatic Life Use Assessment

Sampling Year(s): 1993, 1995, 1997

Sampling Site Size Distribution (mi2)

		<5	5-20	20-50	>50
Aquatic Life Use(s): WWH,MWH-C,LRW	# Sites Sampled:	11	14	8	0

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	4.5	0.0	95.5
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)

Full	Partial	Non
0.05	0.00	0.95

Weighted AU Score (relative amount of attainment weighted by AU size)

Full	Partial	Non
9.2	0.0	195.5

High Magnitude Causes

Unknown Toxicity
Nutrients
Siltation
Flow Alteration
Other Habitat Alterations
Oil and Grease

High Magnitude Sources

Major Industrial Point Source
Nonirrigated Crop Production
Landfills
Channelization - Agriculture
Dredging - Agriculture
Removal of Riparian Vegetation - Ag.
Streambank Destabilization - Ag.
Spills

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 1

Scheduled Monitoring: 2008

Streams within this watershed were sampled as part of the Maumee AOC.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100010 020	Toussaint Creek	143.1

Aquatic Life Use Assessment

Sampling Year(s): 1993, 1995, 1996, 1999

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): WWH

	<5	5-20	20-50	>50
# Sites Sampled:	0	0	0	6

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	100.0

AU Score (relative amount of attainment)		
Full	Partial	Non
0.00	0.00	1.00

Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non
0.0	0.0	143.1

High Magnitude Causes

Other Habitat Alterations

High Magnitude Sources

Nonirrigated Crop Production

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
>5000 colonies/100 ml. fecal coliform bacteria:
>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 1 Scheduled Monitoring: 2003

Most of the recent sampling has been in the Lake Erie estuary portion (Toussaint River). Sampling in the upper portion (Toussaint Creek) has been sparse. Fish tissue sampling was done in 1997.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100010 030	Middle Branch Portage River (headwaters to downstream Rocky Ford Creek)	168.6

Aquatic Life Use Assessment

Sampling Year(s): 1993, 1994, 1999

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): WWH,LRW

	<5	5-20	20-50	>50
# Sites Sampled:	1	0	4	3

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	25.0	25.0	50.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	21.7	78.3	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.23	0.52	0.25

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
39.3	87.2	42.1

High Magnitude Causes

Siltation
Organic Enrichment/DO
Turbidity

High Magnitude Sources

Combined Sewer Overflows
Highway/Road/Bridge/Sewer Line
Onsite Wastewater Systems (Septic Tanks)
Upstream Impoundment
Bridge Construction

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 2

Scheduled Monitoring: 2008

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100010 040	Middle Branch Portage River (downstream Rocky Ford Creek to downstream South Branch)	166.7

Aquatic Life Use Assessment

Sampling Year(s): 1994

	# Sites Sampled:	Sampling Site Size Distribution (mi2)			
		<5	5-20	20-50	>50
Aquatic Life Use(s): WWH		1	5	3	1

Impairment? Yes

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	16.7	0.0	83.3
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	100.0	0.0

AU Score (relative amount of attainment)		
Full	Partial	Non
0.08	0.50	0.42

Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non
13.9	83.3	69.5

High Magnitude Causes

Siltation
Organic Enrichment/DO
Flow Alteration
Other Habitat Alterations

High Magnitude Sources

Major Municipal Point Source
Combined Sewer Overflows
Nonirrigated Crop Production
Pasture Land
Onsite Wastewater Systems (Septic Tanks)
Channelization - Agriculture

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
>5000 colonies/100 ml. fecal coliform bacteria:
>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 2

Scheduled Monitoring: 2008

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100010 050	Portage River (downstream South/Middle Branches to downstream North Branch)	77.2

Aquatic Life Use Assessment

Sampling Year(s): 2000

Sampling Year(s): 2000	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH, LRW	# Sites Sampled: 0	0	0	0

Impairment? Unknown

		% Attainment		
		Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):		0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):		0.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.00	0.00	0.00

High Magnitude Causes

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.0	0.0	0.0

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

A "One Meal per 2 Months" Fish Consumption Advisory is in effect for the North Branch Portage River (Carp) . The area under the advisory includes the entire length of the river.

Integrated Report Assessment Category: 3

Priority:

Scheduled Monitoring: 2008

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100010 060	Portage River (downstream North Branch to downstream Sugar Creek)	87.1

Aquatic Life Use Assessment

Sampling Year(s): 1994

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH				
# Sites Sampled:	0	0	2	11

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	50.0	0.0	50.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	96.2	3.8	0.0

AU Score (relative amount of attainment)

Full	Partial	Non
0.73	0.02	0.25

Weighted AU Score (relative amount of attainment weighted by AU size)

Full	Partial	Non
63.7	1.6	21.8

High Magnitude Causes

Siltation
Organic Enrichment/DO

High Magnitude Sources

Nonirrigated Crop Production
Channelization - Agriculture
Drainage/Filling of Wetland - Ag.

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 3

Scheduled Monitoring: 2008

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100010 070	Portage River (downstream Sugar Creek to mouth); Lake Erie tributaries west of Marblehead	111.3

Aquatic Life Use Assessment

Sampling Year(s): 1994, 1998

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH,LRW				
# Sites Sampled:	0	0	0	9

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	22.3	8.6	69.1

AU Score (relative amount of attainment)

Full	Partial	Non
0.22	0.09	0.69

Weighted AU Score (relative amount of attainment weighted by AU size)

Full	Partial	Non
24.8	9.6	76.9

High Magnitude Causes

Siltation
Organic Enrichment/DO

High Magnitude Sources

Nonirrigated Crop Production

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for the Portage River (Channel catfish, Carp). The area under the advisory is from the Ohio Turnpike to Lake Erie. Additionally, a "One Meal per Week" advisory is in effect (Largemouth Bass, Smallmouth Bass) for the same stretch of the river.

In addition to the fish consumption advisory, there is a "One Meal per Week" Ohio Snapping Turtle Consumption Advisory in effect for the Ottawa National Wildlife Refuge.

Integrated Report Assessment Category: 5

Priority: 2

Scheduled Monitoring: 2008

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100011 010	Muddy Creek; Lake Erie tributaries (Muddy Creek to Marblehead)	136.4

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0
<u>High Magnitude Causes</u>			<u>High Magnitude Sources</u>		

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 Priority: Scheduled Monitoring: 2009

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment. The only recent data are from 2 reference sites on Muddy Creek.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100011 020	Sandusky River (headwaters to upstream Broken Sword Creek)	137.3

Aquatic Life Use Assessment

Sampling Year(s): 2001

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): WWH

Sites Sampled:

<5	5-20	20-50	>50
9	8	2	6

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	29.3	27.7	43.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	47.0	46.7	6.3

AU Score
(relative amount of attainment)

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.38	0.37	0.25

Full	Partial	Non
52.3	51.2	33.8

High Magnitude Causes

High Magnitude Sources

Causes and Sources are pending based on the assessment of the 2001 field data.

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 0

Total # Bacteria Sites in AU: 2

Other:

Impairment? Indeterminate

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for the Sandusky River (Channel Catfish, Largemouth Bass). The area under the advisory includes the entire length of the river. Additionally, a "One Meal per Week" advisory is in effect (Carp).

Integrated Report Assessment Category: 5 Priority: 2 Scheduled Monitoring: 2009

A TMDL for the upper Sandusky River watershed (headwaters to north of Tiffin) is in progress. Monitoring in support of the TMDL was conducted in 2001.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100011 030	Broken Sword Creek	94.5

Aquatic Life Use Assessment

Sampling Year(s): 2001

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH				
# Sites Sampled:	2	3	3	4

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	24.9	0.0	75.1
Large Streams/Rivers (sites w/>50 mi2 drainage):	100.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.63	0.00	0.37

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
59.1	0.0	35.4

High Magnitude Causes

Siltation
Nutrients
Flow Alteration

High Magnitude Sources

Nonirrigated Crop Production
Flow Regulation/Modification-Agriculture

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 3 Scheduled Monitoring: 2009

A TMDL for the upper Sandusky River watershed (headwaters to north of Tiffin) is in progress. Monitoring in support of the TMDL was conducted in 2001.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100011 040	Sandusky River (downstream Broken Sword Creek to upstream Tymochtee Creek)	121.3

Aquatic Life Use Assessment

Sampling Year(s): 1995, 2000, 2001

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH,MWH-C				
# Sites Sampled:	4	7	1	5

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	19.7	9.8	70.5
Large Streams/Rivers (sites w/>50 mi2 drainage):	89.7	10.3	0.0

AU Score
(relative amount of attainment)

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.55	0.10	0.35

Full	Partial	Non
66.3	12.3	42.7

High Magnitude Causes

High Magnitude Sources

Causes and Sources are pending based on the assessment of the 2001 field data.

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 0

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 0

Total # Bacteria Sites in AU: 3

Other:

Impairment? No

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for the Sandusky River (Channel Catfish, Largemouth Bass). The area under the advisory includes the entire length of the river. Additionally, a "One Meal per Week" advisory is in effect (Carp).

Integrated Report Assessment Category: 5 Priority: 4 Scheduled Monitoring: 2009

A TMDL for the upper Sandusky River watershed (headwaters to north of Tiffin) is in progress. Monitoring in support of the TMDL was conducted in 2001.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100011 050	Tymochtee Creek (headwaters to downstream Warpole Creek)	171.6

Aquatic Life Use Assessment

Sampling Year(s): 2001

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): WWH,MWH-C

# Sites Sampled:	<5	5-20	20-50	>50
	3	8	3	3

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	31.2	6.3	62.5
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	40.4	59.6

AU Score
(relative amount of attainment)

Full	Partial	Non
0.16	0.23	0.61

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
26.8	40.1	104.7

High Magnitude Causes

Nutrients
Siltation
Organic Enrichment/DO
Flow Alteration

High Magnitude Sources

Nonirrigated Crop Production
Flow Regulation/Modification-Agriculture
Onsite Wastewater Systems (Septic Tanks)

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 1

>576 colonies/100 ml. E. coli bacteria:

Sites in AU w/ Bacteria Violations: 1

Total # Bacteria Sites in AU: 16

Other:

Impairment? Indeterminate

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 1 Scheduled Monitoring: 2009

A TMDL for the upper Sandusky River watershed (headwaters to north of Tiffin) is in progress. Monitoring in support of the TMDL was conducted in 2001.

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
04100011 060	Tymochtee Creek (downstream Warpole Creek to mouth)	130.1

Aquatic Life Use Assessment

Sampling Year(s): 2001

		Sampling Site Size Distribution (mi2)			
		<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled:	1	4	1	5

Impairment? Yes

		% Attainment		
		Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):		6.3	6.2	87.5
Large Streams/Rivers (sites w/>50 mi2 drainage):		40.8	37.8	21.4

AU Score (relative amount of attainment)		
Full	Partial	Non
0.23	0.22	0.55

Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non
30.6	28.6	70.9

High Magnitude Causes

Flow Alteration
Siltation
Nutrients

High Magnitude Sources

Nonirrigated Crop Production
Flow Regulation/Modification-Agriculture

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 1 Scheduled Monitoring: 2009

A TMDL for the upper Sandusky River watershed (headwaters to north of Tiffin) is in progress. Monitoring in support of the TMDL was conducted in 2001.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100011 070	Sandusky River (downstream Tymochtee Creek to upstream Honey Creek); excluding Sandusky R. mainstem	121.8

Aquatic Life Use Assessment

Sampling Year(s): 1999, 2000, 2001

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH				
# Sites Sampled:	4	6	1	4

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	70.9	8.3	20.8
Large Streams/Rivers (sites w/>50 mi2 drainage):	20.0	80.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.46	0.44	0.10

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
55.4	53.7	12.7

High Magnitude Causes

High Magnitude Sources

Causes and Sources are pending based on the assessment of the 2001 field data.

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 4 Scheduled Monitoring: 2009

A TMDL for the upper Sandusky River watershed (headwaters to north of Tiffin) is in progress. Monitoring in support of the TMDL was conducted in 2001.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100011 080	Honey Creek	179.7

Aquatic Life Use Assessment

Sampling Year(s): 2001

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): WWH,LRW

Sites Sampled:

<5	5-20	20-50	>50
4	9	1	7

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	76.4	11.8	11.8
Large Streams/Rivers (sites w/>50 mi2 drainage):	38.0	40.7	21.3

AU Score
(relative amount of attainment)

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.57	0.26	0.17

Full	Partial	Non
102.8	47.3	29.6

High Magnitude Causes

High Magnitude Sources

Causes and Sources are pending based on the assessment of the 2001 field data.

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 3 Scheduled Monitoring: 2009

A TMDL for the upper Sandusky River watershed (headwaters to north of Tiffin) is in progress. Monitoring in support of the TMDL was conducted in 2001.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100011 090	Sandusky River (downstream Honey Creek to upstream Wolf Creek); excluding Sandusky R. mainstem	116.6

Aquatic Life Use Assessment

Sampling Year(s): 2001

Aquatic Life Use(s): WWH	# Sites Sampled:	Sampling Site Size Distribution (mi2)			
		<5	5-20	20-50	>50
		1	2	1	0

Impairment? Yes

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	50.0	0.0	50.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.50	0.00	0.50

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
58.3	0.0	58.3

High Magnitude Causes

Causes and Sources are pending based on the assessment of the 2001 field data.

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 3 Scheduled Monitoring: 2009

A TMDL for the upper Sandusky River watershed (headwaters to north of Tiffin) is in progress. Monitoring in support of the TMDL was conducted in 2001.

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
04100011 100	Wolf Creek	157.8

Aquatic Life Use Assessment

Sampling Year(s):	<u>Sampling Site Size Distribution (mi2)</u>					
	<table border="0" style="width:100%"> <tr> <td style="width:25%; text-align:center"><5</td> <td style="width:25%; text-align:center">5-20</td> <td style="width:25%; text-align:center">20-50</td> <td style="width:25%; text-align:center">>50</td> </tr> </table>	<5	5-20	20-50	>50	
<5	5-20	20-50	>50			
Aquatic Life Use(s): WWH,LRW	<table border="0" style="width:100%"> <tr> <td style="width:25%; text-align:center"># Sites Sampled:</td> <td style="width:25%; text-align:center">0</td> <td style="width:25%; text-align:center">0</td> <td style="width:25%; text-align:center">0</td> <td style="width:25%; text-align:center">0</td> </tr> </table>	# Sites Sampled:	0	0	0	0
# Sites Sampled:	0	0	0	0		

Impairment? Unknown	<u>% Attainment</u>			
	<table border="0" style="width:100%"> <tr> <td style="width:33%; text-align:center">Full</td> <td style="width:33%; text-align:center">Partial</td> <td style="width:33%; text-align:center">Non</td> </tr> </table>	Full	Partial	Non
Full	Partial	Non		
Small Streams (sites w/<50 mi2 drainage):	<table border="0" style="width:100%"> <tr> <td style="width:33%; text-align:center">0.0</td> <td style="width:33%; text-align:center">0.0</td> <td style="width:33%; text-align:center">0.0</td> </tr> </table>	0.0	0.0	0.0
0.0	0.0	0.0		
Large Streams/Rivers (sites w/>50 mi2 drainage):	<table border="0" style="width:100%"> <tr> <td style="width:33%; text-align:center">0.0</td> <td style="width:33%; text-align:center">0.0</td> <td style="width:33%; text-align:center">0.0</td> </tr> </table>	0.0	0.0	0.0
0.0	0.0	0.0		

AU Score (relative amount of attainment)	Weighted AU Score (relative amount of attainment weighted by AU size)												
<table border="0" style="width:100%"> <tr> <td style="width:33%; text-align:center"><u>Full</u></td> <td style="width:33%; text-align:center"><u>Partial</u></td> <td style="width:33%; text-align:center"><u>Non</u></td> </tr> <tr> <td style="text-align:center">0.00</td> <td style="text-align:center">0.00</td> <td style="text-align:center">0.00</td> </tr> </table>	<u>Full</u>	<u>Partial</u>	<u>Non</u>	0.00	0.00	0.00	<table border="0" style="width:100%"> <tr> <td style="width:33%; text-align:center"><u>Full</u></td> <td style="width:33%; text-align:center"><u>Partial</u></td> <td style="width:33%; text-align:center"><u>Non</u></td> </tr> <tr> <td style="text-align:center">0.0</td> <td style="text-align:center">0.0</td> <td style="text-align:center">0.0</td> </tr> </table>	<u>Full</u>	<u>Partial</u>	<u>Non</u>	0.0	0.0	0.0
<u>Full</u>	<u>Partial</u>	<u>Non</u>											
0.00	0.00	0.00											
<u>Full</u>	<u>Partial</u>	<u>Non</u>											
0.0	0.0	0.0											
<u>High Magnitude Causes</u>	<u>High Magnitude Sources</u>												

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
 >5000 colonies/100 ml. fecal coliform bacteria: 7
 >576 colonies/100 ml. E. coli bacteria):
 # Sites in AU w/ Bacteria Violations: 7
 Total # Bacteria Sites in AU: 11
 Other:

Impairment? Yes

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 9 Scheduled Monitoring: 2009

The last biological sampling done on Wolf Creek was in 1991. The only other recent data is chemical sampling done on small ditches near unsewered towns.

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
04100011 110	Green Creek	80.9

Aquatic Life Use Assessment

Sampling Year(s):	<u>Sampling Site Size Distribution (mi2)</u>			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled: 0	0	0	0

Impairment? Unknown	<u>% Attainment</u>		
	<u>Full</u>	<u>Partial</u>	<u>Non</u>
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

<u>AU Score</u> (relative amount of attainment)			<u>Weighted AU Score</u> (relative amount of attainment weighted by AU size)		
<u>Full</u>	<u>Partial</u>	<u>Non</u>	<u>Full</u>	<u>Partial</u>	<u>Non</u>
0.00	0.00	0.00	0.0	0.0	0.0
<u>High Magnitude Causes</u>			<u>High Magnitude Sources</u>		

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
 >5000 colonies/100 ml. fecal coliform bacteria:
 >576 colonies/100 ml. E. coli bacteria):
 # Sites in AU w/ Bacteria Violations:
 Total # Bacteria Sites in AU: 0
 Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 Priority: Scheduled Monitoring: 2009

This watershed has very little data of any kind. The only biological data collected were from one Stream Regionalization Project site in 1983. Fish tissue sampling was done at one location in 1998.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100011 120	Sandusky River (downstream Wolf Creek to mouth); excluding Green Creek and Sandusky R. mainstem	108.4

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0

High Magnitude Causes

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
>5000 colonies/100 ml. fecal coliform bacteria:
>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 **Priority:** **Scheduled Monitoring: 2009**

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment. Fish tissue sampling was done at one site on Muskellunge Creek in 1998.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100011 130	Lake Erie tributaries (East of Green Creek to west of Mills Creek)	163.8

Aquatic Life Use Assessment

Sampling Year(s): 1995

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): CWH,WWH	1	8	2	0
# Sites Sampled:	1	8	2	0

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	3.1	3.1	93.8
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.03	0.03	0.94

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
5.1	5.1	153.6

High Magnitude Causes

Organic Enrichment/DO
Other Habitat Alterations

High Magnitude Sources

Major Municipal Point Source
Channelization - Agriculture
Channelization - Development

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 1 Scheduled Monitoring: 2009

Pickereel Creek and Buck Creek are currently listed on the 303(d) list, but data from 1983 are not adequate to justify keeping them on the list. Another survey of these streams is needed to reassess the status.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100011 140	Lake Erie tributaries (West of Mills Creek to East of Sawmill Creek)	104.3

Aquatic Life Use Assessment

Sampling Year(s): 1991, 1995

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): WWH,MWH-C

Sites Sampled:

<5	5-20	20-50	>50
2	3	0	0

Impairment? Yes

% Attainment

Small Streams (sites w/<50 mi2 drainage):

Large Streams/Rivers (sites w/>50 mi2 drainage):

Full	Partial	Non
33.3	0.0	66.7
0.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.33	0.00	0.67

High Magnitude Causes

Nutrients
Siltation

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
34.7	0.0	69.6

High Magnitude Sources

Nonirrigated Crop Production

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 3

Scheduled Monitoring: 2009

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100012 010	West Branch Huron River (headwaters to upstream Slate Run)	132.1

Aquatic Life Use Assessment

Sampling Year(s): 1998

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH				
# Sites Sampled:	3	3	2	3

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	16.7	25.0	58.3
Large Streams/Rivers (sites w/>50 mi2 drainage):	72.6	27.4	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.45	0.26	0.29

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
59.0	34.6	38.5

High Magnitude Causes

Nutrients
Organic Enrichment/DO
Flow Alteration
Other Habitat Alterations
Oil and Grease

High Magnitude Sources

Major Municipal Point Source
Nonirrigated Crop Production
Channelization - Agriculture
Channelization - Development
Upstream Impoundment
Waste Storage/Storage Tank Leaks

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 3 Scheduled Monitoring: 2012

A TMDL is in progress for the Huron River basin. Sampling was done in 1998 and 2002.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100012 020	West Branch Huron River (upstream Slate Run to mouth)	129.8

Aquatic Life Use Assessment

Sampling Year(s): 1998

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): WWH

Sites Sampled:

<5	5-20	20-50	>50
0	6	2	4

Impairment? Yes

% Attainment

Small Streams (sites w/<50 mi2 drainage):

Large Streams/Rivers (sites w/>50 mi2 drainage):

Full	Partial	Non
83.3	0.0	16.7
100.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.92	0.00	0.08

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
119.0	0.0	10.8

High Magnitude Causes

Nutrients
Other Habitat Alterations
Natural Limits (Wetlands)

High Magnitude Sources

Nonirrigated Crop Production
Channelization - Agriculture
Natural

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 2 Scheduled Monitoring: 2012

A TMDL is in progress for the Huron River basin. Sampling was done in 1998 and 2002.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100012 030	Huron River, East Branch Huron River, Lake Erie tributaries (East of Sawmill Cr. to west of Huron R)	150.6

Aquatic Life Use Assessment

Sampling Year(s): 1998

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): WWH

Sites Sampled:

<5	5-20	20-50	>50
2	7	4	10

Impairment? Yes

% Attainment

Small Streams (sites w/<50 mi2 drainage):

Large Streams/Rivers (sites w/>50 mi2 drainage):

Full	Partial	Non
30.3	66.1	3.6
46.9	53.1	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.39	0.59	0.02

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
58.1	89.8	2.7

High Magnitude Causes

Cause Unknown
Nutrients
Siltation
Other Habitat Alterations

High Magnitude Sources

Major Municipal Point Source
Nonirrigated Crop Production
Channelization- Development

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 2

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 1

Total # Bacteria Sites in AU: 1

Other:

Impairment? Indeterminate

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for the Huron River (Freshwater Drum). The area under the advisory includes the entire length of the river.

Integrated Report Assessment Category: 5 Priority: 3 Scheduled Monitoring: 2012

A TMDL is in progress for the Huron River basin. Sampling was done in 1998 and 2002.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100012 040	Lake Erie tributaries (East of Huron River to West of Vermilion River)	83.2

Aquatic Life Use Assessment

Sampling Year(s): 1993

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH				
# Sites Sampled:	3	4	7	0

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	14.6	64.5	20.9
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.15	0.64	0.21

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
12.1	53.7	17.4

High Magnitude Causes

Nutrients
Siltation
Other Habitat Alterations

High Magnitude Sources

Nonirrigated Crop Production

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 2 Scheduled Monitoring: 2011

Most of the data in this watershed is from Old Woman Creek. A TMDL is in progress. Sampling was done in 2002.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100012 050	Vermilion River (headwaters to upstream East Branch)	140.3

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0

High Magnitude Causes

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 0

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 0

Total # Bacteria Sites in AU: 2

Other:

Impairment? Indeterminate

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for the Vermilion River (Smallmouth Bass). The area under the advisory includes the entire length of the river.

Integrated Report Assessment Category: 3 **Priority:** **Scheduled Monitoring: 2011**

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment. The last biological survey done in this watershed was in 1987. Only reference sites on the Vermilion River mainstem have been sampled since then. A TMDL is in progress for the Vermilion River basin. Sampling was done in 2002. The middle portion of the Vermilion River is currently listed on the 303(d) list but data from 1987 are not adequate to justify

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04100012 060	Vermilion River (upstream East Branch to mouth)	127.7

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0
<u>High Magnitude Causes</u>			<u>High Magnitude Sources</u>		

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
>5000 colonies/100 ml. fecal coliform bacteria: 2
>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 2

Total # Bacteria Sites in AU: 4

Other:

Impairment? Indeterminate

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for the Vermilion River (Smallmouth Bass). The area under the advisory includes the entire length of the river.

Integrated Report Assessment Category: 3 **Priority:** **Scheduled Monitoring: 2011**

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment. The last biological survey done in this watershed was in 1987. Only reference sites on the Vermilion River mainstem have been sampled since then. A TMDL is in progress for the Vermilion River basin. Sampling was done in 2002.

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
04110001 010	Lake Erie tributaries (East of Vermilion River to West of Black River)	71.5

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0

High Magnitude Causes

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
 >5000 colonies/100 ml. fecal coliform bacteria: 0
 >576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 0

Total # Bacteria Sites in AU: 3

Other:

Impairment? Indeterminate

Fish Consumption Assessment

Integrated Report Assessment Category: 3 Priority: Scheduled Monitoring: 2006

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment. Most of the recent data have been from the Lake Erie shoreline, and Beaver Creek (Amherst).

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
04110001 020	West Branch Black River	174.0

Aquatic Life Use Assessment

Sampling Year(s): 1997

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): WWH

	<5	5-20	20-50	>50
# Sites Sampled:	7	16	6	5

Impairment? Yes

% Attainment

	<u>Full</u>	<u>Partial</u>	<u>Non</u>
Small Streams (sites w/<50 mi2 drainage):	5.1	58.2	36.7
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	7.5	92.5

AU Score
(relative amount of attainment)

<u>Full</u>	<u>Partial</u>	<u>Non</u>
0.03	0.33	0.64

Weighted AU Score
(relative amount of attainment weighted by AU size)

<u>Full</u>	<u>Partial</u>	<u>Non</u>
4.5	57.1	112.4

High Magnitude Causes

Cause Unknown
Nutrients
Siltation
Organic Enrichment/DO

High Magnitude Sources

Nonirrigated Crop Production
Pasture Land
Urban Runoff/Storm Sewers (NPS)
Onsite Wastewater Systems (Septic Tanks)
Source Unknown

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 0

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 0

Total # Bacteria Sites in AU: 1

Other:

Impairment? Indeterminate

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 1 Scheduled Monitoring: 2011

A TMDL is in progress in the Black River basin. Field monitoring in support of the TMDL was conducted in 1997 and 2001.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04110001 030	East Branch Black River (headwaters to downstream Coon Creek)	95.8

Aquatic Life Use Assessment

Sampling Year(s): 1997

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): WWH

Sites Sampled:

<5	5-20	20-50	>50
0	3	0	1

Impairment? Yes

% Attainment

Small Streams (sites w/<50 mi2 drainage):

Large Streams/Rivers (sites w/>50 mi2 drainage):

Full	Partial	Non
100.0	0.0	0.0
45.9	54.1	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.73	0.27	0.00

High Magnitude Causes

Siltation

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
69.9	25.9	0.0

High Magnitude Sources

Nonirrigated Crop Production

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 0

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 0

Total # Bacteria Sites in AU: 4

Other:

Impairment? Indeterminate

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for the East Branch Black River (Rock Bass, Smallmouth Bass, Yellow Bullhead). The area under the advisory includes the entire length of the stream.

Integrated Report Assessment Category: 4B Priority: Scheduled Monitoring: 2011

A TMDL is in progress in the Black River basin. Field monitoring in support of the TMDL was conducted in 1997 and 2001.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04110001 040	East Branch Black River (downstream Coon Creek to mouth)	125.8

Aquatic Life Use Assessment

Sampling Year(s): 1997

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): WWH

Sites Sampled:

<5	5-20	20-50	>50
1	2	0	7

Impairment? Yes

% Attainment

Small Streams (sites w/<50 mi2 drainage):

Large Streams/Rivers (sites w/>50 mi2 drainage):

Full	Partial	Non
0.0	0.0	0.0
80.3	19.7	0.0

AU Score (relative amount of attainment)		
Full	Partial	Non
0.75	0.20	0.05

Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non
94.7	24.8	6.3

High Magnitude Causes

Nutrients
Siltation
Organic Enrichment/DO
Other Habitat Alterations

High Magnitude Sources

Minor Municipal Point Source
Combined Sewer Overflow
Nonirrigated Crop Production
Channelization - Agriculture

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 1

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 1

Total # Bacteria Sites in AU: 6

Other:

Impairment? Indeterminate

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for the East Branch Black River (Rock Bass, Smallmouth Bass, Yellow Bullhead). The area under the advisory includes the entire length of the stream.

Integrated Report Assessment Category: 5 Priority: 5 Scheduled Monitoring: 2011

A TMDL is in progress in the Black River basin. Field monitoring in support of the TMDL was conducted in 1997 and 2001.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04110001 050	Black River; Lake Erie tributaries East of Black River to West of Porter Creek)	100.8

Aquatic Life Use Assessment

Sampling Year(s): 1997

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH				
# Sites Sampled:	0	0	3	14

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	33.3	66.7
Large Streams/Rivers (sites w/>50 mi2 drainage):	23.7	26.9	49.4

AU Score
(relative amount of attainment)

Full	Partial	Non
0.12	0.30	0.58

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
12.0	30.3	58.5

High Magnitude Causes

Unknown Toxicity
Priority Organics
Nutrients
Organic Enrichment/DO

High Magnitude Sources

Industrial Point Source
Major Municipal Point Source
Combined Sewer Overflows
Source Unknown

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 1

>576 colonies/100 ml. E. coli bacteria): 1

Sites in AU w/ Bacteria Violations: 1

Total # Bacteria Sites in AU: 13

Other: A "Dermal Contact Advisory" is in effect for the Black River due to PAHs contamination. The area under the advisory is from the 31st St. bridge in Lorain to Lake Erie.

Impairment? Yes

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for the Black River (Carp). The area under the advisory is from the 31st St. bridge in Lorain to Lake Erie. Additionally, a "One Meal per Week" advisory is in effect (Brown Bullhead, Freshwater Drum) for the same stretch of the river.

In addition to the fish consumption advisories, there is a "One Meal per Week" Ohio Snapping Turtle Consumption Advisory in effect for the entire length of the Black River.

Integrated Report Assessment Category: 5 Priority: 9 Scheduled Monitoring: 2011

A TMDL is in progress in the Black River basin. Field monitoring in support of the TMDL was conducted in 1997 and 2001.

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
04110001 060	West Branch Rocky River	190.2

Aquatic Life Use Assessment

Sampling Year(s): 1997

		<u>Sampling Site Size Distribution (mi2)</u>			
		<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled:	3	5	1	7

Impairment? Yes

	% Attainment		
	<u>Full</u>	<u>Partial</u>	<u>Non</u>
Small Streams (sites w/<50 mi2 drainage):	60.0	10.0	30.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	71.9	28.1	0.0

<u>AU Score</u> (relative amount of attainment)		
<u>Full</u>	<u>Partial</u>	<u>Non</u>
0.66	0.19	0.15

<u>Weighted AU Score</u> (relative amount of attainment weighted by AU size)		
<u>Full</u>	<u>Partial</u>	<u>Non</u>
125.6	36.1	28.5

High Magnitude Causes

Unknown Toxicity
Unionized Ammonia
Nutrients
Siltation
Organic Enrichment/DO
Other Habitat Alterations

High Magnitude Sources

Municipal Point Source
Land Development/Suburbanization
Urban Runoff/Storm Sewers (NPS)
Source Unknown

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 15

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 8

Total # Bacteria Sites in AU: 9

Other:

Impairment? Yes

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for the West Branch Rocky River (Rock Bass, Smallmouth Bass). The area under the advisory includes the entire length of the river.

Integrated Report Assessment Category: 5 Priority: 11 Scheduled Monitoring: 2006

A TMDL was partially approved for the Rocky River basin in 2001. Monitoring in support of the TMDL was conducted in 1997. Follow-up monitoring was conducted in 2001.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04110001 070	Rocky River; East Branch Rocky R.; Lake Erie tributaries (West of Porter Cr. to West 139.8 of Cuyahoga R.)	

Aquatic Life Use Assessment

Sampling Year(s): 1997

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH				
# Sites Sampled:	6	12	2	18

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	37.5	39.6	22.9
Large Streams/Rivers (sites w/>50 mi2 drainage):	57.7	35.7	6.6

AU Score
(relative amount of attainment)

Full	Partial	Non
0.48	0.37	0.15

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
66.5	52.6	20.7

High Magnitude Causes

Unionized Ammonia
Chlorine
Nutrients
Siltation
Organic Enrichment/DO
Flow Alteration
Other Habitat Alterations

High Magnitude Sources

Municipal Point Source
Highway/Road/Bridge/Sewer Line
Land Development/Suburbanization
Urban Runoff/Storm Sewers (NPS)
Channelization - Development
Flow Reg./Mod. - Development
Streambank Destabilization - Development
Marinas

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 31

>576 colonies/100 ml. E. coli bacteria): 2

Sites in AU w/ Bacteria Violations: 16

Total # Bacteria Sites in AU: 18

Other:

Impairment? Yes

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 11 Scheduled Monitoring: 2006

A TMDL was partially approved for the Rocky River basin in 2001. Monitoring in support of the TMDL was conducted in 1997. Follow-up monitoring was conducted in 2001.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04110002 010	Cuyahoga River (headwaters to downstream Black Brook)	148.9

Aquatic Life Use Assessment

Sampling Year(s): 1993, 1996, 2000

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): WWH,LRW

Sites Sampled:

<5	5-20	20-50	>50
10	8	3	3

Impairment? Yes

% Attainment

Small Streams (sites w/<50 mi2 drainage):

Large Streams/Rivers (sites w/>50 mi2 drainage):

Full	Partial	Non
38.5	22.3	39.2
0.0	100.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.19	0.61	0.20

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
28.7	91.0	29.2

High Magnitude Causes

Siltation
Organic Enrichment/DO
Flow Alteration
Other Habitat Alterations
Natural Limits (Wetlands)

High Magnitude Sources

Pasture Land
Onsite Wastewater Systems (Septic Tanks)
Flow Reg./Mod. - Development
Natural

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 0

>576 colonies/100 ml. E. coli bacteria: 13

Sites in AU w/ Bacteria Violations: 7

Total # Bacteria Sites in AU: 23

Other:

Impairment? Yes

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 9 Scheduled Monitoring: 2010

A TMDL is in progress for the lower Cuyahoga River basin. Monitoring in support of the TMDL was conducted in 1996 and 2000.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04110002 020	Cuyahoga River (downstream Black Brook to downstream Breakneck Creek)	139.9

Aquatic Life Use Assessment

Sampling Year(s): 1996, 2000

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH,MWH-C,LRW				
# Sites Sampled:	9	1	0	11

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	77.8	16.7	5.5
Large Streams/Rivers (sites w/>50 mi2 drainage):	82.8	14.4	2.8

AU Score
(relative amount of attainment)

Full	Partial	Non
0.80	0.16	0.04

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
112.3	21.7	5.9

High Magnitude Causes

Unknown Toxicity
Siltation
Organic Enrichment/DO
Flow Alteration
Other Habitat Alterations
Natural Limits (Wetlands)

High Magnitude Sources

Major Municipal Point Source
Minor Municipal Point Source
Nonirrigated Crop Production
Channelization - Agriculture
Channelization - Development
Flow Reg./Mod. - Development
Natural

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 0

>576 colonies/100 ml. E. coli bacteria: 3

Sites in AU w/ Bacteria Violations: 2

Total # Bacteria Sites in AU: 20

Other:

Impairment? Indeterminate

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 3 Scheduled Monitoring: 2005

A TMDL was approved for the middle Cuyahoga River basin by the USEPA in 2000. Monitoring in support of the TMDL was conducted by the Ohio EPA in 1996 and 2000.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04110002 030	Cuyahoga River (downstream Breakneck Creek to downstream Little Cuyahoga River)	112.2

Aquatic Life Use Assessment

Sampling Year(s): 1996, 2000

Sampling Site Size Distribution (mi2)

		<5	5-20	20-50	>50
Aquatic Life Use(s): WWH,MWH-C,LRW	# Sites Sampled:	5	7	6	17

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	12.1	0.0	87.9
Large Streams/Rivers (sites w/>50 mi2 drainage):	5.9	55.5	38.6

AU Score
(relative amount of attainment)

Full	Partial	Non
0.09	0.28	0.63

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
10.1	31.2	70.9

High Magnitude Causes

Unknown Toxicity
Nutrients
Siltation
Organic Enrichment/DO
Flow Alteration
Other Habitat Alterations
Total Toxics

High Magnitude Sources

Major Municipal Point Source
Combined Sewer Overflows
Sewer Line Construction
Urban Runoff/Storm Sewers (NPS)
Onsite Wastewater Systems (Septic Tanks)
Channelization - Development
Dam Construction - Development
Natural

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 23

>576 colonies/100 ml. E. coli bacteria: 12

Sites in AU w/ Bacteria Violations: 20

Total # Bacteria Sites in AU: 34

Other:

Impairment? Yes

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for the Cuyahoga River (Carp, Largemouth Bass, White Suckers 11 inches and larger). The area under the advisory is from the Ohio Edison Dam Pool in Cuyahoga Falls to Lake Erie. Additionally, a "One Meal Every 2 Months" advisory is in effect (Brown Bullhead, Yellow Bullhead) and a "One Meal per Week" advisory (White Suckers under 11 inches) for the same stretch of the river.

Integrated Report Assessment Category: 5 Priority: 9 Scheduled Monitoring: 2005

A TMDL was approved for the middle Cuyahoga River basin by the USEPA in 2000. Monitoring in support of the TMDL was conducted by the Ohio EPA in 1996 and 2000.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04110002 040	Cuyahoga River (downstream Little Cuyahoga River to downstream Brandywine Creek)	153.9

Aquatic Life Use Assessment

Sampling Year(s): 1996, 2000

	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled: 16	6	4	3

Impairment? Yes

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	78.1	7.3	14.6
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	68.5	31.5

AU Score (relative amount of attainment)		
Full	Partial	Non
0.39	0.38	0.23

Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non
60.0	58.4	35.5

High Magnitude Causes

Unknown Toxicity
Nutrients
Organic Enrichment/DO
Flow Alteration
Other Habitat Alterations

High Magnitude Sources

Major Municipal Point Source
Combined Sewer Overflows
Land Development/Suburbanization
Urban Runoff/Storm Sewers (NPS)

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 7

>576 colonies/100 ml. E. coli bacteria: 20

Sites in AU w/ Bacteria Violations: 15

Total # Bacteria Sites in AU: 30

Other:

Impairment? Yes

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for the Cuyahoga River (Carp, Largemouth Bass, White Suckers 11 inches and larger). The area under the advisory is from the Ohio Edison Dam Pool in Cuyahoga Falls to Lake Erie. Additionally, a "One Meal Every 2 Months" advisory is in effect (Brown Bullhead, Yellow Bullhead) and a "One Meal per Week" advisory (White Suckers under 11 inches) for the same stretch of the river.

Integrated Report Assessment Category: 5 Priority: 9 Scheduled Monitoring: 2010

A TMDL is in progress for the lower Cuyahoga River basin. Monitoring in support of the TMDL was conducted in 1996 and 2000.

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
04110002 050	Cuyahoga River (downstream Brandywine Cr. to downstream Tinkers Cr.); excluding 138.1 Cuyahoga R. mainstem	

Aquatic Life Use Assessment

Sampling Year(s): 2000

Sampling Site Size Distribution (mi2)

		<5	5-20	20-50	>50
Aquatic Life Use(s): WWH,MWH-C,LRW	# Sites Sampled:	12	8	0	5

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	39.6	18.8	41.6
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	35.6	64.4

AU Score (relative amount of attainment)		
Full	Partial	Non
0.20	0.27	0.53

Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non
27.3	37.6	73.2

High Magnitude Causes

Cause Unknown
Nutrients
Organic Enrichment/DO
Flow Alteration
Other Habitat Alterations
Oil and Grease
Natural Limits (Wetlands)

High Magnitude Sources

Major Municipal Point Sources
Land Development/Suburbanization
Urban Runoff/Storm Sewers (NPS)
Onsite Wastewater Systems (Septic Tanks)
Natural
Source Unknown

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 7

>576 colonies/100 ml. E. coli bacteria): 36

Sites in AU w/ Bacteria Violations: 16

Total # Bacteria Sites in AU: 22

Other:

Impairment? Yes

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 8 Scheduled Monitoring: 2010

A TMDL is in progress for the lower Cuyahoga River basin. Monitoring in support of the TMDL was conducted in 1996 and 2000.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04110002 060	Cuyahoga River (downstream Tinkers Creek to mouth); excluding Cuyahoga R. mainstem	115.6

Aquatic Life Use Assessment

Sampling Year(s): 1996, 2000

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH,LRW				
# Sites Sampled:	8	5	2	2

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	3.1	8.1	88.8
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.03	0.08	0.89

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
3.6	9.4	102.6

High Magnitude Causes

Metals
Organic Enrichment/DO
Flow Alteration
Other Habitat Alterations

High Magnitude Sources

Combined Sewer Overflows
Urban Runoff/Storm Sewers (NPS)
Spills

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 11

>576 colonies/100 ml. E. coli bacteria: 7

Sites in AU w/ Bacteria Violations: 10

Total # Bacteria Sites in AU: 11

Other:

Impairment? Yes

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 8 Scheduled Monitoring: 2010

A TMDL is in progress for the lower Cuyahoga River basin. Monitoring in support of the TMDL was conducted in 1996 and 2000.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04110003 010	Lake Erie tributaries (East of Cuyahoga River to West of Grand River); excluding Chagrin River	119.0

Aquatic Life Use Assessment

Sampling Year(s): 2000

Sampling Year(s): 2000	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH,LRW	# Sites Sampled: 2	5	2	0

Impairment? Yes

		% Attainment		
		Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):		0.0	5.0	95.0
Large Streams/Rivers (sites w/>50 mi2 drainage):		0.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.00	0.05	0.95

High Magnitude Causes

Organic Enrichment/DO
Flow Alteration

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.0	6.0	113.0

High Magnitude Sources

Combined Sewer Overflows
Urban Runoff/Storm Sewers (NPS)

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 0

>576 colonies/100 ml. E. coli bacteria: 8

Sites in AU w/ Bacteria Violations: 4

Total # Bacteria Sites in AU: 8

Other:

Impairment? Yes

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 8 Scheduled Monitoring: 2010

Development of a TMDL for these small tributaries of Lake Erie located within the Cleveland metropolitan area will begin in 2003. Monitoring in support of the TMDL was conducted in the Euclid Creek and Doan Brook watersheds in 2000.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04110003 020	Chagrin River (headwaters to downstream Aurora Branch)	119.5

Aquatic Life Use Assessment

Sampling Year(s): 1994, 1995, 1996

Sampling Site Size Distribution (mi2)

		<5	5-20	20-50	>50
Aquatic Life Use(s): CWH,EWH,WWH	# Sites Sampled:	10	9	5	8

Impairment? Yes

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	66.1	26.1	7.8
Large Streams/Rivers (sites w/>50 mi2 drainage):	97.8	2.2	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.82	0.14	0.04

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
97.9	17.0	4.6

High Magnitude Causes

Mercury
Unionized Ammonia
Chlorine
Organic Enrichment/DO
Thermal Modifications
Flow Alteration
Other Habitat Alterations
Noxious Aquatic Plants

Filling and Draining

High Magnitude Sources

Major Industrial Point Source
Package Plants (Small Flows)
Highway/Road/Bridge/Sewer Line
Onsite Wastewater Systems (Septic Tanks)
Drainage/Filling of Wetlands - Dev.
Natural
Upstream Impoundment

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 0

>576 colonies/100 ml. E. coli bacteria: 3

Sites in AU w/ Bacteria Violations: 2

Total # Bacteria Sites in AU: 2

Other:

Impairment? Indeterminate

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for the Chagrin River (Rock Bass, Smallmouth Bass). The area under the advisory includes the entire length of the river.

Integrated Report Assessment Category: 5

Priority: 4

Scheduled Monitoring: 2004

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04110003 030	Chagrin River (downstream Aurora Branch to mouth)	145.1

Aquatic Life Use Assessment

Sampling Year(s): 1995, 1996

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): CWH,WWH

	<5	5-20	20-50	>50
# Sites Sampled:	5	8	0	7

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	87.5	12.5	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	74.5	25.5	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.81	0.19	0.00

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
117.5	27.6	0.0

High Magnitude Causes

Cause Unknown
Organic Enrichment/DO
Flow Alteration
Other Habitat Alterations

High Magnitude Sources

Major Municipal Point Source
Land Development/Suburbanization
Urban Runoff/Storm Sewers (NPS)
Onsite Wastewater Systems (Septic Tanks)
Marinas
Source Unknown

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 1

>576 colonies/100 ml. E. coli bacteria: 2

Sites in AU w/ Bacteria Violations: 1

Total # Bacteria Sites in AU: 1

Other:

Impairment? Indeterminate

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for the Chagrin River (Rock Bass, Smallmouth Bass). The area under the advisory includes the entire length of the river.

Integrated Report Assessment Category: 5

Priority: 4

Scheduled Monitoring: 2004

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04110003 040	Lake Erie tributaries (East of Grand River to West of Ashtabula River)	114.9

Aquatic Life Use Assessment

Sampling Year(s): 1995

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	0	12	1	0
# Sites Sampled:	0	12	1	0

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	54.2	12.5	33.3
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.54	0.13	0.33

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
62.2	14.4	38.3

High Magnitude Causes

Cause Unknown
Nutrients
Organic Enrichment/DO
Flow Alteration
Other Habitat Alterations

High Magnitude Sources

Minor Municipal Point Source
Channelization - Development
Flow Reg./Mod. - Development
Source Unknown

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 3

Scheduled Monitoring: 2009

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04110003 050	Ashtabula River	126.8

Aquatic Life Use Assessment

Sampling Year(s): 1995

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH,LRW				
# Sites Sampled:	0	0	1	5

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	100.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	80.7	14.6	4.7

AU Score
(relative amount of attainment)

Full	Partial	Non
0.91	0.07	0.02

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
114.6	9.2	3.0

High Magnitude Causes

Cause Unknown
Priority Organics
Other Habitat Alterations

High Magnitude Sources

Land Disposal
Hazardous Waste
Contaminated Sediments

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 0

>576 colonies/100 ml. E. coli bacteria: 5

Sites in AU w/ Bacteria Violations: 2

Total # Bacteria Sites in AU: 2

Other:

Impairment? Yes

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for the Ashtabula River (Largemouth Bass, Walleye). Additionally, a "One Meal per 2 Months" advisory is in effect (Channel Catfish, Carp). And lastly, a "One Meal per Week" advisory is in effect (Smallmouth Bass). The area under the advisories is from the 24th St. bridge in Ashtabula to Lake Erie. In addition to the fish consumption advisories, there is a "One Meal per Week" Ohio Snapping Turtle Consumption Advisory in effect for the entire length of the Ashtabula River.

Integrated Report Assessment Category: 5 Priority: 11 Scheduled Monitoring: 2009

A project to dredge and dispose of contaminated sediments from the lower Ashtabula River is currently in the design stage. The project is a collaborative effort between the Ohio EPA, the Army Corps of Engineers, and the Ashtabula River Partnership. The current schedule calls for construction to begin in the spring of 2004. Future monitoring within the watershed will be conducted within the normal rotating basin schedule after the cessation of the project and when sufficient

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
04110004 010	Grand River (headwaters to downstream Swine Creek)	156.7

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0

High Magnitude Causes

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
 >5000 colonies/100 ml. fecal coliform bacteria:
 >576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 Priority: Scheduled Monitoring: 2009

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04110004 020	Grand River (downstream Swine Creek to upstream Rock Creek)	131.9

Aquatic Life Use Assessment

Sampling Year(s): 1995, 1999

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH				
# Sites Sampled:	1	3	1	0

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	50.0	50.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	38.1	61.9	0.0

AU Score
(relative amount of attainment)

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.44	0.56	0.00

Full	Partial	Non
58.2	73.7	0.0

High Magnitude Causes

High Magnitude Sources

Flow Alteration

Natural

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 4 Scheduled Monitoring: 2009

Most of the data used in this assessment were collected by the Ohio Department of Natural Resources, Division of Wildlife.

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
04110004 030	Rock Creek	70.7

Aquatic Life Use Assessment

Sampling Year(s):	<u>Sampling Site Size Distribution (mi2)</u>				
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<5	5-20	20-50	>50		
Aquatic Life Use(s): WWH	# Sites Sampled: <table border="0" style="width:100%"> <tr> <td style="width:25%; text-align:center">0</td> <td style="width:25%; text-align:center">0</td> <td style="width:25%; text-align:center">0</td> <td style="width:25%; text-align:center">0</td> </tr> </table>	0	0	0	0
0	0	0	0		

Impairment? Unknown	<u>% Attainment</u>			
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Full	Partial	Non		
Small Streams (sites w/<50 mi2 drainage):	<table border="0" style="width:100%"> <tr> <td style="width:33%; text-align:center">0.0</td> <td style="width:33%; text-align:center">0.0</td> <td style="width:33%; text-align:center">0.0</td> </tr> </table>	0.0	0.0	0.0
0.0	0.0	0.0		
Large Streams/Rivers (sites w/>50 mi2 drainage):	<table border="0" style="width:100%"> <tr> <td style="width:33%; text-align:center">0.0</td> <td style="width:33%; text-align:center">0.0</td> <td style="width:33%; text-align:center">0.0</td> </tr> </table>	0.0	0.0	0.0
0.0	0.0	0.0		

<u>AU Score</u> (relative amount of attainment)	<u>Weighted AU Score</u> (relative amount of attainment weighted by AU size)												
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<u>Full</u>	<u>Partial</u>	<u>Non</u>											
0.00	0.00	0.00											
<u>Full</u>	<u>Partial</u>	<u>Non</u>											
0.0	0.0	0.0											
<u>High Magnitude Causes</u>	<u>High Magnitude Sources</u>												

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 Priority: Scheduled Monitoring: 2009

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04110004 040	Grand River (downstream Rock Creek to upstream Mill Creek)	57.7

Aquatic Life Use Assessment

Sampling Year(s):

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): EWH,WWH

Sites Sampled:

<5	5-20	20-50	>50
0	0	0	0

Impairment? Unknown

% Attainment

Small Streams (sites w/<50 mi2 drainage):

Large Streams/Rivers (sites w/>50 mi2 drainage):

Full	Partial	Non
0.0	0.0	0.0
0.0	0.0	0.0

AU Score
(relative amount of attainment)

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.00	0.00	0.00

Full	Partial	Non
0.0	0.0	0.0

High Magnitude Causes

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3

Priority:

Scheduled Monitoring: 2009

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment.

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
04110004 050	Mill Creek	103.3

Aquatic Life Use Assessment

Sampling Year(s):	<u>Sampling Site Size Distribution (mi2)</u>				
	<5	5-20	20-50	>50	
Aquatic Life Use(s): WWH	# Sites Sampled:	0	0	0	0

Impairment? Unknown

	<u>% Attainment</u>		
	<u>Full</u>	<u>Partial</u>	<u>Non</u>
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score
(relative amount of attainment)

<u>Full</u>	<u>Partial</u>	<u>Non</u>
0.00	0.00	0.00

High Magnitude Causes

Weighted AU Score
(relative amount of attainment weighted by AU size)

<u>Full</u>	<u>Partial</u>	<u>Non</u>
0.0	0.0	0.0

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
 >5000 colonies/100 ml. fecal coliform bacteria:
 >576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3

Priority:

Scheduled Monitoring: 2004

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04110004 060	Grand River (downstream Mill Creek to mouth); excluding Grand R. mainstem	184.1

Aquatic Life Use Assessment

Sampling Year(s): 1995

Sampling Site Size Distribution (mi2)

		<5	5-20	20-50	>50
Aquatic Life Use(s): CWH,EWH,WWH	# Sites Sampled:	3	2	3	8

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	54.2	37.5	8.3
Large Streams/Rivers (sites w/>50 mi2 drainage):	91.4	6.2	2.4

AU Score
(relative amount of attainment)

Full	Partial	Non
0.73	0.22	0.05

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
134.1	40.2	9.8

High Magnitude Causes

Cause Unknown
Organic Enrichment/DO

High Magnitude Sources

Minor Municipal Point Source
Source Unknown

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 4

>576 colonies/100 ml. E. coli bacteria: 16

Sites in AU w/ Bacteria Violations: 3

Total # Bacteria Sites in AU: 7

Other:

Impairment? Yes

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 11 Scheduled Monitoring: 2004

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment.

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
04120101 010	Conneaut Creek; Lake Erie tributaries (East of Ashtabula River to West of Conneaut Creek)	61.5

Aquatic Life Use Assessment

Sampling Year(s): 1995, 2000

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH				
# Sites Sampled:	0	0	0	8

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	99.0	1.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.99	0.01	0.00

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
60.9	0.6	0.0

High Magnitude Causes

Cause Unknown
Priority Organics
Metals
Other Habitat Alterations

High Magnitude Sources

Landfills
Dredging - Development
Streambank Destabilization - Development
Source Unknown

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for Conneaut Creek (Smallmouth Bass). The area under the advisory includes the entire length of the stream.

Integrated Report Assessment Category: 5 Priority: 4 Scheduled Monitoring: 2009

The only nonattainment (partial) in Conneaut Creek was a 0.3 mile stretch in the harbor area. The entire free-flowing area was in full attainment of biological criteria.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04120101 060	Lake Erie tributaries (East of Conneaut Creek)	1.5

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): CWH	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0

High Magnitude Causes

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 **Priority:** **Scheduled Monitoring: 2009**

This is a very tiny watershed within Ohio. Most of it extends into Pennsylvania. The only stream in Ohio within this reach is Turkey Creek, with chemical data from 1981. Recent Lake Erie shoreline data are available.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
04120200 010	Lake Erie Islands	9.0

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)				
	<5	5-20	20-50	>50	
Aquatic Life Use(s):	# Sites Sampled:	0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0
<u>High Magnitude Causes</u>			<u>High Magnitude Sources</u>		

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
>5000 colonies/100 ml. fecal coliform bacteria:
>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 Priority: Scheduled Monitoring: 2009

No data of any kind have ever been collected by the Ohio EPA on the Lake Erie Islands. Only shoreline data on Lake Erie have been collected.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05030101 070	Middle Fork Little Beaver Creek	149.1

Aquatic Life Use Assessment

Sampling Year(s): 1999		Sampling Site Size Distribution (mi2)			
		<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH	# Sites Sampled:	7	13	5	8

Impairment? Yes

		% Attainment		
		Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):		36.1	23.8	40.1
Large Streams/Rivers (sites w/>50 mi2 drainage):		56.7	43.3	0.0

AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.46	0.34	0.20	69.2	50.1	29.8

High Magnitude Causes

Cause Unknown Oil and Grease
Pesticides Natural Limits (Wetlands)
Unionized Ammonia
Nutrients
Siltation
Organic Enrichment/DO
Salinity/TDS/Chlorides
Other Habitat Alterations

High Magnitude Sources

Major Municipal Point Source Channelization- Development
Nonirrigated Crop Production Removal of Riparian Veg. - Ag.
Pasture Land Spills
Confined Animal Feeding Operations (NPS) Source Unknown
Urban Runoff/ Storm Sewers (NPS)
Surface Mining
Onsite Wastewater Systems (Septic Tanks)
Channelization - Ag.

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 4

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 3

Total # Bacteria Sites in AU: 34

Other: A "Dermal Contact Advisory" is in effect for Middle Fork Little Beaver Creek due to Mirex contamination. The area under the advisory is from Alternate St. Rt. 14 at Allen Rd. near Salem to St. Rt. 11 south of Lisbon.

Impairment? Yes

Fish Consumption Assessment

A "Do Not Eat" Fish Consumption Advisory is in effect for Middle Fork Little Beaver Creek (all species) due to Mirex contamination. The area under the advisory is from Alternate St. Rt. 14 at Allen Rd. near Salem to St. Rt. 11 south of Lisbon.

Integrated Report Assessment Category: 5 Priority: 12 Scheduled Monitoring: 2008

Development of a TMDL for the Little Beaver Creek basin will begin in 2003. Intensive monitoring in support of the TMDL was conducted in the watershed in 1999.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05030101 080	West Fork Little Beaver Creek	111.2

Aquatic Life Use Assessment

Sampling Year(s): 1999

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH				
# Sites Sampled:	4	5	3	3

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	53.8	25.0	21.2
Large Streams/Rivers (sites w/>50 mi2 drainage):	46.0	54.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.50	0.39	0.11

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
55.5	43.9	11.8

High Magnitude Causes

Cause Unknown
Siltation
Flow Alteration
Natural Limits (Wetlands)

High Magnitude Sources

Pasture Land
Channelization - Agriculture
Channelization - Development
Upstream Impoundment
Removal of Riparian Vegetation - Ag.
Natural
Source Unknown

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 2

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 1

Total # Bacteria Sites in AU: 12

Other:

Impairment? Indeterminate

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 5 Scheduled Monitoring: 2008

Development of a TMDL for the Little Beaver Creek basin will begin in 2003. Intensive monitoring in support of the TMDL was conducted in the watershed in 1999.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05030101 090	Little Beaver Creek (downstream Middle and West Forks to mouth)	140.1

Aquatic Life Use Assessment

Sampling Year(s): 1999

Sampling Site Size Distribution (mi2)

		<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH,LRW	# Sites Sampled:	9	14	1	8

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	79.9	5.4	14.7
Large Streams/Rivers (sites w/>50 mi2 drainage):	100.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.90	0.03	0.07

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
125.9	3.8	10.4

High Magnitude Causes

Unionized Ammonia
Nutrients
Siltation
Organic Enrichment/DO
Flow Alteration
Other Habitat Alterations
Pathogens
Natural Limits (Wetlands)

High Magnitude Sources

Major Industrial Point Source
Combined Sewer Overflows
Pasture Land
Surface Mining
Subsurface Mining
Channelization - Development
Removal of Riparian Vegetation - Development
Natural

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 4

>576 colonies/100 ml. E. coli bacteria: 2

Sites in AU w/ Bacteria Violations: 3

Total # Bacteria Sites in AU: 29

Other:

Impairment? Indeterminate

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for Little Beaver Creek (Carp, Sauger). The area under the advisory includes the entire length of the stream. Additionally, a "One Meal per 2 Months" advisory is in effect (Channel Catfish).

Integrated Report Assessment Category: 5 Priority: 4 Scheduled Monitoring: 2008

Development of a TMDL for the Little Beaver Creek basin will begin in 2003. Intensive monitoring in support of the TMDL was conducted in the watershed in 1999.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05030101 100	Ohio River tributaries (downstream Little Beaver Creek to upstream Yellow Creek)	45.2

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0

High Magnitude Causes

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 Priority: Scheduled Monitoring: 2005

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment. The only data are from Little Yellow Creek, sampled between 1997-1999.

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
05030101 180	Yellow Creek (headwaters to upstream Town Fork)	118.7

Aquatic Life Use Assessment

Sampling Year(s): 1996, 1997, 1999	<u>Sampling Site Size Distribution (mi2)</u>			
	<5	5-20	20-50	>50
Aquatic Life Use(s): CWH,EWH,WWH,LRW	# Sites Sampled: 2	5	2	1

Impairment? Yes

	<u>% Attainment</u>		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	70.0	0.0	30.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	100.0	0.0	0.0

<u>AU Score</u> (relative amount of attainment)		
Full	Partial	Non
0.85	0.00	0.15

<u>Weighted AU Score</u> (relative amount of attainment weighted by AU size)		
Full	Partial	Non
100.9	0.0	17.8

High Magnitude Causes

Nutrients

High Magnitude Sources

Onsite Wastewater Systems (Septic Tanks)

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
>5000 colonies/100 ml. fecal coliform bacteria:
>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 2

Scheduled Monitoring: 2005

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05030101 190	Yellow Creek (upstream Town Fork to mouth)	120.4

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): CWH,WWH,LRW	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0

High Magnitude Causes

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3

Priority:

Scheduled Monitoring: 2005

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment. The vast majority of the data in this watershed are from 1983. Only biological reference sites have been sampled since then. Yellow Creek, North Fork Yellow Creek and Randolph Run are currently listed on the 303(d) list, but data from 1983 are not adequate to justify keeping them on the list. Another survey of these streams is needed to reassess

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
05030101 210	Ohio River tributaries (downstream Yellow Creek to upstream Cross Creek)	70.6

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): CWH,WWH	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0
<u>High Magnitude Causes</u>			<u>High Magnitude Sources</u>		

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
 >5000 colonies/100 ml. fecal coliform bacteria:
 >576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 Priority: Scheduled Monitoring: 2005

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment. Only one biological reference site (Wills Creek) has been sampled in this watershed since 1987.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05030101 340	Cross Creek	127.5

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): CWH,WWH,LRW	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0
<u>High Magnitude Causes</u>			<u>High Magnitude Sources</u>		

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
>5000 colonies/100 ml. fecal coliform bacteria:
>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 **Priority:** **Scheduled Monitoring: 2005**

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment. The only recent biological sampling done have been at reference sites. Fish tissue data were collected in 2000. The vast majority of the data in this watershed are from 1983. Cross Creek, and a tributary to Dry Fork are currently listed on the 303(d) list, but data from 1983 are not adequate to justify keeping them on the list. Another survey of these

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05030102 010	Tributaries to Pymatuning Reservoir (within Ohio)	40.7

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0
<u>High Magnitude Causes</u>			<u>High Magnitude Sources</u>		

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
>5000 colonies/100 ml. fecal coliform bacteria:
>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 Priority: Scheduled Monitoring: 2008

None of the streams in Ohio which drain into Pymatuning Reservoir have ever been sampled by the Ohio EPA.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05030102 030	Pymatuning Creek	149.5

Aquatic Life Use Assessment

Sampling Year(s): 1994

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	0	2	1	7

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	25.0	25.0	50.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	100.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.12	0.13	0.75

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
18.7	18.7	112.1

High Magnitude Causes

Organic Enrichment/DO
Flow Alterations
Other Habitat Alterations
Pathogens

High Magnitude Sources

Urban Runoff/Storm Sewers (NPS)
Channelization - Agriculture
Natural

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 1 Scheduled Monitoring: 2008

The natural wetland characteristics of the Pymatuning Creek contribute significantly to the nonattainment status throughout the watershed.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05030102 050	Yankee Creek; Little Yankee Creek	94.6

Aquatic Life Use Assessment

Sampling Year(s): 1994

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): WWH

	<5	5-20	20-50	>50
# Sites Sampled:	0	2	9	0

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	30.6	11.1	58.3
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.31	0.11	0.58

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
28.9	10.5	55.2

High Magnitude Causes

Nutrients
Flow Alteration
Other Habitat Alterations

High Magnitude Sources

Major Municipal Point Source
Urban Runoff/Storm Sewers (NPS)
Hydromodification - Development
Habitat Modifications other than Hydromod.
Source Unknown

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 1

Scheduled Monitoring: 2008

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05030103 010	Mahoning River (headwaters to downstream Beech Creek)	129.2

Aquatic Life Use Assessment

Sampling Year(s): 1994

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	0	1	0	4

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	100.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	22.4	0.0	77.6

AU Score
(relative amount of attainment)

Full	Partial	Non
0.61	0.00	0.39

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
79.1	0.0	50.1

High Magnitude Causes

Cause Unknown
Metals

High Magnitude Sources

Minor Industrial Point Source
Minor Municipal Point Source
Spills
Contaminated Sediments
Source Unknown

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 3 Scheduled Monitoring: 2008

A TMDL for bacteria will be prepared by the USEPA for the Mahoning River mainstem (Duck Creek to the Shenango River) in 2003.

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
05030103 020	Mahoning River (downstream Beech Creek to downstream Berlin Dam)	118.7

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0
<u>High Magnitude Causes</u>			<u>High Magnitude Sources</u>		

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
>5000 colonies/100 ml. fecal coliform bacteria:
>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 Priority: Scheduled Monitoring: 2008

Most of this segment consists of Berlin Lake. No tributaries to the lake have available biological data. A TMDL for bacteria will be prepared by the USEPA for the Mahoning River mainstem (Duck Creek to the Shenango River) in 2003.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05030103 030	Mahoning River (downstream Berlin Dam to downstream West Branch)	167.1

Aquatic Life Use Assessment

Sampling Year(s): 1994

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH				
# Sites Sampled:	0	0	0	7

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	49.0	51.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.00	0.49	0.51

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.0	81.9	85.2

High Magnitude Causes

Organic Enrichment/DO
Flow Alteration
Other Habitat Alterations
Suspended Solids
Turbidity

High Magnitude Sources

Channelization - Development
Dam Construction - Development
Flow Reg./Mod. - Development

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
>5000 colonies/100 ml. fecal coliform bacteria:
>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 0

Total # Bacteria Sites in AU: 6

Other:

Impairment? No

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for the Mahoning River (Smallmouth Bass) due to PCBs and Mercury contamination. The area under the advisory is from Berlin Dam to the Pennsylvania border.

Integrated Report Assessment Category: 5 Priority: 2 Scheduled Monitoring: 2008

A TMDL for bacteria will be prepared by the USEPA for the Mahoning River mainstem (Duck Creek to the Shenango River) in 2003.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05030103 040	Mahoning River (downstream West Branch to upstream Duck Creek)	126.9

Aquatic Life Use Assessment

Sampling Year(s): 1994, 1999

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): CWH,WWH

Sites Sampled:

<5	5-20	20-50	>50
0	4	0	2

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	75.0	25.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	37.4	0.0	62.6

AU Score
(relative amount of attainment)

Full	Partial	Non
0.56	0.13	0.31

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
71.3	15.9	39.7

High Magnitude Causes

Organic Enrichment/DO
Other Habitat Alterations
Natural Limits (Wetlands)

High Magnitude Sources

Channelization - Development
Dam Construction - Development
Flow Reg./Mod. - Development
Natural

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 4C Priority: 3 Scheduled Monitoring: 2008

Only biological reference sites within this assessment unit have been sampled since 1987. A TMDL for bacteria will be prepared by the USEPA for the Mahoning River mainstem (Duck Creek to the Shenango River) in 2003.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05030103 050	Mahoning River (upstream Duck Creek to upstream Mosquito Creek); excluding Mahoning R. mainstem	87.6

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH,LRW	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0
<u>High Magnitude Causes</u>			<u>High Magnitude Sources</u>		

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
>5000 colonies/100 ml. fecal coliform bacteria:
>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 Priority: Scheduled Monitoring: 2008

A TMDL for bacteria will be prepared by the USEPA for the Mahoning River mainstem (Duck Creek to the Shenango River) in 2003.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05030103 060	Mosquito Creek	138.1

Aquatic Life Use Assessment

Sampling Year(s): 1990, 1994

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	0	0	0	7

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	13.6	86.4

AU Score
(relative amount of attainment)

Full	Partial	Non
0.00	0.14	0.86

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.0	18.8	119.3

High Magnitude Causes

Suspended Solids

High Magnitude Sources

Minor Industrial Point Source
Major Municipal Point Source
Upstream Impoundment

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria:

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 1 Scheduled Monitoring: 2008

Very little data have been collected in this watershed since 1983. All historical data are from downstream of Mosquito Creek Reservoir. No data have been collected on tributaries flowing into the lake.

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
05030103 070	Mahoning River (downstream Mosquito Creek to upstream Mill Creek); excluding Mahoning R.	130.5

Aquatic Life Use Assessment

Sampling Year(s): 1994

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH				
# Sites Sampled:	0	0	0	4

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	100.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.00	0.00	1.00

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.0	0.0	130.5

High Magnitude Causes

Metals
Unionized Ammonia
Nutrients
Organic Enrichment/DO
Other Habitat Alterations
Suspended Solids

High Magnitude Sources

Major Municipal Point Source
Dam Construction - Development

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 1 Scheduled Monitoring: 2008

A TMDL for bacteria will be prepared by the USEPA for the Mahoning River mainstem (Duck Creek to the Shenango River) in 2003.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05030103 080	Mahoning River (upstream Mill Creek to mouth); excluding Mahoning R. mainstem	185.7

Aquatic Life Use Assessment

Sampling Year(s): 1994

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH				
# Sites Sampled:	2	3	5	6

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	8.3	91.7
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	100.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.00	0.04	0.96

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.0	1.6	178.1

High Magnitude Causes

Cause Unknown
Metals
Unionized Ammonia
Nutrients
Siltation
Organic Enrichment/DO

High Magnitude Sources

Major Municipal Point Source
Combined Sewer Overflow
Nonirrigated Crop Production
Urban Runoff/Storm Sewers (NPS)
Channelization - Agriculture
Dam Construction - Agriculture
Natural
Source Unknown

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 1 Scheduled Monitoring: 2008

A TMDL for bacteria will be prepared by the USEPA for the Mahoning River mainstem (Duck Creek to the Shenango River) in 2003.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05030106 010	Ohio River tributaries (downstream Cross Creek to downstream Short Creek)	180.5

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH,LRW,LWH	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0
<u>High Magnitude Causes</u>			<u>High Magnitude Sources</u>		

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
 >5000 colonies/100 ml. fecal coliform bacteria:
 >576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 0

Total # Bacteria Sites in AU: 1

Other:

Impairment? Indeterminate

Fish Consumption Assessment

Integrated Report Assessment Category: 3 Priority: Scheduled Monitoring: 2005

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment. The vast majority of the data in this watershed are from 1983-1988. Short Creek and Sally Buffalo Creek are currently listed on the 303(d) list, but data from 1983-1988 are not adequate to justify keeping them on the list. Another survey of these streams is needed to reassess the status.

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
05030106 040	Ohio River tributaries (downstream Short Creek to downstream Wheeling Creek)	130.2

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH,MWH-C,LWH	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0
<u>High Magnitude Causes</u>			<u>High Magnitude Sources</u>		

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
>5000 colonies/100 ml. fecal coliform bacteria:
>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 0

Total # Bacteria Sites in AU: 1

Other:

Impairment? Indeterminate

Fish Consumption Assessment

Integrated Report Assessment Category: 3 Priority: Scheduled Monitoring: 2010

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment. The vast majority of the data in this watershed are from 1983. Wheeling Creek and Deep Run are currently listed on the 303(d) list, but data from 1983 are not adequate to justify keeping them on the list. Another survey of these streams is needed to reassess the status.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05030106 100	Ohio River tributaries (downstream Wheeling Creek to downstream McMahon Creek)	97.3

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH,LRW	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)		
Full	Partial	Non
0.00	0.00	0.00

High Magnitude Causes

Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non
0.0	0.0	0.0

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
>5000 colonies/100 ml. fecal coliform bacteria:
>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 Priority: Scheduled Monitoring: 2010

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment. The vast majority of the data in this watershed are from 1983. McMahon Creek, Little McMahon Creek, Kings Run, Aults Run and Williams Creek are currently listed on the 303(d) list but data from 1983 are not adequate to justify keeping them on the list. Another survey of these streams is needed to reassess the status.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05030106 110	Ohio River tributaries (downstream McMahon Creek to downstream Fish Creek [WV])	229.8

Aquatic Life Use Assessment

Sampling Year(s): 1996, 1998, 2000

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): EWH,WWH,LRW

Sites Sampled:

<5	5-20	20-50	>50
2	2	3	7

Impairment? Yes

% Attainment

Small Streams (sites w/<50 mi2 drainage):

Large Streams/Rivers (sites w/>50 mi2 drainage):

Full	Partial	Non
58.3	29.2	12.5
95.8	4.2	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.77	0.17	0.06

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
177.2	38.4	14.2

High Magnitude Causes

Cause Unknown
Flow Alteration

High Magnitude Sources

Natural
Source Unknown

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 0

Total # Bacteria Sites in AU: 8

Other:

Impairment? Indeterminate

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 4 Scheduled Monitoring: 2010

There are numerous biological reference sites on Captina Creek and several tributaries within the watershed. The mainstem coverage is adequate to assess water quality, but many tributaries have never been sampled. The smaller Ohio River tributaries have not been sampled since 1983.

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
05030201 010	Ohio River tributaries (downstream Fish Creek [WV] to downstream Sunfish Creek)	123.8

Aquatic Life Use Assessment

Sampling Year(s): 1996, 2000

Sampling Site Size Distribution (mi2)

		<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH	# Sites Sampled:	2	1	2	3

Impairment? Yes

% Attainment

	<u>Full</u>	<u>Partial</u>	<u>Non</u>
Small Streams (sites w/<50 mi2 drainage):	62.5	0.0	37.5
Large Streams/Rivers (sites w/>50 mi2 drainage):	100.0	0.0	0.0

AU Score
(relative amount of attainment)

<u>Full</u>	<u>Partial</u>	<u>Non</u>
0.81	0.00	0.19

Weighted AU Score
(relative amount of attainment weighted by AU size)

<u>Full</u>	<u>Partial</u>	<u>Non</u>
100.6	0.0	23.2

High Magnitude Causes

Unknown Cause

High Magnitude Sources

Unknown Source

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 0

Total # Bacteria Sites in AU: 6

Other:

Impairment? No

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 2

Scheduled Monitoring: 2010

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05030201 020	Ohio River tributaries (downstream Sunfish Creek to upstream Muskingum River)	136.5

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0

High Magnitude Causes

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria:

Sites in AU w/ Bacteria Violations: 0

Total # Bacteria Sites in AU: 2

Other:

Impairment? Indeterminate

Fish Consumption Assessment

Integrated Report Assessment Category: 3 **Priority:** **Scheduled Monitoring: 2010**

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment. One reference site was sampled on Leith Run in 2000.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05030201 090	Little Muskingum River (headwaters to upstream Clear Fork)	148.9

Aquatic Life Use Assessment

Sampling Year(s): 2000

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH				
# Sites Sampled:	7	10	3	5

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	100.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	87.4	8.4	4.2

AU Score
(relative amount of attainment)

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.94	0.04	0.02

Full	Partial	Non
139.5	6.3	3.1

High Magnitude Causes

Siltation

High Magnitude Sources

Nonirrigated Crop Production
Pasture Land

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 0

Total # Bacteria Sites in AU: 1

Other:

Impairment? Indeterminate

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 4 Scheduled Monitoring: 2010

An intensive biological and water quality survey was conducted in the Little Muskingum River watershed in 2000.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05030201 100	Little Muskingum River (upstream Clear Fork to mouth)	165.7

Aquatic Life Use Assessment

Sampling Year(s): 1996, 2000

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): EWH,WWH

Sites Sampled:

<5	5-20	20-50	>50
12	14	2	7

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	100.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	54.3	42.8	2.9

AU Score
(relative amount of attainment)

Full	Partial	Non
0.77	0.21	0.02

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
127.8	35.5	2.4

High Magnitude Causes

Nutrients
Siltation
Flow Alteration

High Magnitude Sources

Nonirrigated Crop Production
Pasture Land
Onsite Wastewater Systems (Septic Tanks)

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 1

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 1

Total # Bacteria Sites in AU: 3

Other:

Impairment? Indeterminate

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for Little Muskingum River (Spotted Bass). The area under the advisory is from Hill's Covered Bridge to the Ohio River.

Integrated Report Assessment Category: 5 Priority: 6 Scheduled Monitoring: 2010

An intensive biological and water quality survey was conducted in the Little Muskingum River watershed in 2000.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05030201 110	East Fork Duck Creek	136.2

Aquatic Life Use Assessment

Sampling Year(s): 1998, 2000

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH,LWH				
# Sites Sampled:	39	7	4	4

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	56.6	24.1	19.3
Large Streams/Rivers (sites w/>50 mi2 drainage):	88.0	12.0	0.0

AU Score (relative amount of attainment)

Full	Partial	Non
0.72	0.18	0.10

Weighted AU Score (relative amount of attainment weighted by AU size)

Full	Partial	Non
98.5	24.5	13.2

High Magnitude Causes

Cause Unknown
Metals
Siltation
Organic Enrichment/DO
Flow Alteration
Other Habitat Alterations
Suspended Solids
Total Toxics

High Magnitude Sources

Pasture Land
Highway/Road/Bridge/Sewer Line
Urban Runoff/Storm Sewers (NPS)
Surface Mining
Acid Mine Drainage
Onsite Wastewater Systems (Septic Tanks)
Bridge Construction
Source Unknown

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 3

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 3

Total # Bacteria Sites in AU: 23

Other:

Impairment? Indeterminate

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 3 Scheduled Monitoring: 2010

A TMDL is in progress for the Duck Creek basin. Monitoring in support of the TMDL was conducted in 2000.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05030201 120	Duck Creek; West Fork Duck Creek	149.6

Aquatic Life Use Assessment

Sampling Year(s): 1997, 1998, 2000

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): WWH,LRW LWH

	<5	5-20	20-50	>50
# Sites Sampled:	36	3	2	17

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	86.1	9.8	4.1
Large Streams/Rivers (sites w/>50 mi2 drainage):	93.0	3.0	4.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.90	0.06	0.04

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
134.0	9.6	6.0

High Magnitude Causes

Unknown Toxicity
Siltation
Organic Enrichment/DO
Flow Alteration

High Magnitude Sources

Urban Runoff/Storm Sewers (NPS)
Surface Mining
Onsite Wastewater Systems (Septic Tanks)
Upstream Impoundment
Flow Reg./Mod. - Development
Spills

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 4

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 4

Total # Bacteria Sites in AU: 28

Other:

Impairment? Indeterminate

Fish Consumption Assessment

Integrated Report Assessment Category: 5 **Priority: 2** **Scheduled Monitoring: 2010**

A TMDL is in progress for the Duck Creek basin. Monitoring in support of the TMDL was conducted in 2000.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05030202 010	Ohio River tributaries (downstream Muskingum R. to upstream Hocking River); Little Hocking River	141.3

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0
<u>High Magnitude Causes</u>			<u>High Magnitude Sources</u>		

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 **Priority:** **Scheduled Monitoring: 2008**

The only data from this watershed are from one site on the Little Hocking River, sampled in 1990. Little Hocking River is currently listed on the 303(d) list, but data from 1990 are not adequate to justify keeping it on the list. Another survey of the stream is needed to reassess the status.

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
05030202 020	Ohio River tributaries (downstream Hocking River to upstream Shade River)	27.9

Aquatic Life Use Assessment

Sampling Year(s):	<u>Sampling Site Size Distribution (mi2)</u>			
	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH	# Sites Sampled:	0	0	0

Impairment? Unknown	<u>% Attainment</u>		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

<u>AU Score</u> (relative amount of attainment)			<u>Weighted AU Score</u> (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0
<u>High Magnitude Causes</u>			<u>High Magnitude Sources</u>		

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
 >5000 colonies/100 ml. fecal coliform bacteria:
 >576 colonies/100 ml. E. coli bacteria):
 # Sites in AU w/ Bacteria Violations:
 Total # Bacteria Sites in AU: 0
 Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 **Priority:** **Scheduled Monitoring: 2009**
 No data have ever been collected on streams in this watershed.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05030202 030	Middle Branch and West Branch Shade River	128.9

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH	# Sites Sampled:	0	0	0
Impairment? Unknown				
	% Attainment			
	Full	Partial	Non	
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0	
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0	
AU Score (relative amount of attainment)	Weighted AU Score (relative amount of attainment weighted by AU size)			
Full	Full	Partial	Non	
0.00	0.0	0.0	0.0	
High Magnitude Causes	High Magnitude Sources			

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
 >5000 colonies/100 ml. fecal coliform bacteria:
 >576 colonies/100 ml. E. coli bacteria):
 # Sites in AU w/ Bacteria Violations:
 Total # Bacteria Sites in AU: 0
 Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 Priority: Scheduled Monitoring: 2009

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment. Shade River is currently listed on the 303(d) list, but data from 1990 are not adequate to justify keeping it on the list. Another survey of the stream is needed to reassess the status.

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
05030202 040	Shade River (Middle Branch and West Branch to mouth)	92.1

Aquatic Life Use Assessment

Sampling Year(s):		Sampling Site Size Distribution (mi2)			
		<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH	# Sites Sampled:	0	0	0	0

Impairment? Unknown

		% Attainment		
		Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):		0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):		0.0	0.0	0.0

AU Score (relative amount of attainment)		
Full	Partial	Non
0.00	0.00	0.00

Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non
0.0	0.0	0.0

High Magnitude Causes

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
 >5000 colonies/100 ml. fecal coliform bacteria:
 >576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 Priority: Scheduled Monitoring: 2009

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05030202 050	Ohio River tributaries (downstream Shade River to upstream Leading Creek)	81.7

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0
<u>High Magnitude Causes</u>			<u>High Magnitude Sources</u>		

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
>5000 colonies/100 ml. fecal coliform bacteria:
>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 Priority: Scheduled Monitoring: 2009

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05030202 090	Leading Creek	150.1

Aquatic Life Use Assessment

Sampling Year(s): 1993-1996, 1998-2000

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH				
# Sites Sampled:	6	0	3	6

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	33.3	0.0	66.7
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	31.4	68.6

AU Score (relative amount of attainment)

Full	Partial	Non
0.17	0.16	0.67

Weighted AU Score (relative amount of attainment weighted by AU size)

Full	Partial	Non
25.1	23.6	101.4

High Magnitude Causes

Cause Unknown
pH
Siltation
Salinity/TDS/Chlorides
Other Habitat Alterations

High Magnitude Sources

Minor Industrial Point Source
Nonirrigated Crop Production
Pasture Land
Surface Mining
Subsurface Mining
Channelization - Development
Source Unknown

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 1 Scheduled Monitoring: 2009

Extensive sampling has been done since 1993 to monitor the recovery of Leading Creek and Parker Run following a major release of acidic mine water.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05030202 100	Ohio River tributaries (downstream Leading Creek to upstream Kanawha River [WV])	88.8

Aquatic Life Use Assessment

Sampling Year(s): 1982, 1990

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): WWH,LRW

	<5	5-20	20-50	>50
# Sites Sampled:	5	2	3	0

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	16.7	83.3
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.00	0.17	0.83

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.0	14.8	74.0

High Magnitude Causes

Metals
pH
Siltation
Flow Alteration
Direct Habitat Alterations

High Magnitude Sources

Industrial Point Sources
Nonirrigated Crop Production
Surface Mining
Subsurface Mining
Natural

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 1 Scheduled Monitoring: 2009

Kyger Creek and Bell Lick Run were included on the 1998 303(d) list based on data from 1990 and 1982, respectively. Since these data are no longer current (i.e., more than 10 years old), reassessment of current conditions is warranted. However, recognizing the continued pervasive impacts related to ongoing mining activities, retaining the Assessment Unit on the 303(d) list is appropriate.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05030204 010	Hocking River (headwaters to Enterprise); excluding Rush Creek and Clear Creek	132.0

Aquatic Life Use Assessment

Sampling Year(s): 1995

Sampling Site Size Distribution (mi2)

		<5	5-20	20-50	>50
Aquatic Life Use(s): WWH,MWH-C	# Sites Sampled:	2	5	4	0

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	90.0	5.0	5.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	56.8	43.2	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.73	0.24	0.03

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
96.9	31.8	3.3

High Magnitude Causes

Siltation
Organic Enrichment/DO

High Magnitude Sources

Major Municipal Point Source
Combined Sewer Overflows
Channelization - Development
Groundwater Loadings

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 11

>576 colonies/100 ml. E. coli bacteria:

Sites in AU w/ Bacteria Violations: 1

Total # Bacteria Sites in AU: 1

Other:

Impairment? Yes

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for the Hocking River (Carp). The area under the advisory includes the entire length of the river.

Integrated Report Assessment Category: 5 Priority: 12 Scheduled Monitoring: 2004

The Hocking River has shown dramatic improvement since the early 1980's due to upgrades at the Lancaster WWTP.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05030204 020	Rush Creek (headwaters to upstream Little Rush Creek)	98.9

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH,LRW	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0

High Magnitude Causes

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 **Priority:** **Scheduled Monitoring: 2004**

The last major Ohio EPA survey of the Rush Creek watershed was in 1982. Only biological reference sites have been sampled since then. Rush Creek, Center Branch, Turkey Run, and a tributary to Rush Creek (RM 19.40) are currently listed on the 303(d) list, but data from 1982 are not adequate to justify keeping them on the list. Another survey of these streams is needed to reassess the status.

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
05030204 030	Rush Creek (upstream Little Rush Creek to mouth)	136.0

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH,MWH-C,LRW	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0
<u>High Magnitude Causes</u>			<u>High Magnitude Sources</u>		

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 1

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 1

Total # Bacteria Sites in AU: 1

Other:

Impairment? Indeterminate

Fish Consumption Assessment

Integrated Report Assessment Category: 3 Priority: Scheduled Monitoring: 2004

The last major Ohio EPA survey of the Rush Creek watershed was in 1982. Only biological reference sites have been sampled since then. Durbin Run and Raccoon Run are currently listed on the 303(d) list, but data from 1982 are not adequate to justify keeping them on the list. Another survey of these streams is needed to reassess the status.

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
05030204 040	Clear Creek	91.8

Aquatic Life Use Assessment

Sampling Year(s): 1995

Sampling Site Size Distribution (mi2)

		<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled:	5	5	2	3

Impairment? Yes

% Attainment

	<u>Full</u>	<u>Partial</u>	<u>Non</u>
Small Streams (sites w/<50 mi2 drainage):	90.0	5.0	5.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	100.0	0.0	0.0

AU Score
(relative amount of attainment)

<u>Full</u>	<u>Partial</u>	<u>Non</u>
0.95	0.03	0.02

Weighted AU Score
(relative amount of attainment weighted by AU size)

<u>Full</u>	<u>Partial</u>	<u>Non</u>
87.2	2.3	2.3

High Magnitude Causes

Nutrients
Organic Enrichment/DO
Flow Alteration

High Magnitude Sources

Minor Municipal Point Source
Nonirrigated Crop Production
Hydromodification - Agriculture
Natural

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 2

Scheduled Monitoring: 2004

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05030204 050	Hocking River (Enterprise to upstream Monday Creek); excluding Hocking R. mainstem dst. Duck Creek	126.3

Aquatic Life Use Assessment

Sampling Year(s): 1990, 1995

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH				
# Sites Sampled:	1	1	1	2

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	50.0	50.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	100.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.75	0.25	0.00

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
94.7	31.6	0.0

High Magnitude Causes

Metals
pH
Salinity/TDS/Chlorides
Flow Alteration

High Magnitude Sources

Acid Mine Drainage
Natural

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 2

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 1

Total # Bacteria Sites in AU: 1

Other:

Impairment? Indeterminate

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for the Hocking River (Carp). The area under the advisory includes the entire length of the river.

Integrated Report Assessment Category: 5 Priority: 5 Scheduled Monitoring: 2004

Only the upper portion of this watershed was sampled in 1995. The lower portion has not been sampled since 1990.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05030204 060	Monday Creek	116.0

Aquatic Life Use Assessment

Sampling Year(s): 1990, 1995, 1997

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): WWH,LRW

Sites Sampled: 11 4 5 3

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	24.5	0.0	75.5
Large Streams/Rivers (sites w/>50 mi2 drainage):	37.9	0.0	62.1

AU Score
(relative amount of attainment)

Full	Partial	Non
0.31	0.00	0.69

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
36.2	0.0	79.8

High Magnitude Causes

Metals
pH
Siltation
Flow Alteration

High Magnitude Sources

Nonirrigated Crop Production
Surface Mining
Acid Mine Drainage
Natural

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 1 Scheduled Monitoring: 2009

A TMDL, in collaboration with an ODNr AMDAP project, is in progress for the Monday Creek watershed. Monitoring in support of the TMDL/AMDAP projects was conducted by the Ohio EPA in 2001.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05030204 070	Sunday Creek	138.7

Aquatic Life Use Assessment

Sampling Year(s): 1990, 1997, 2000

Sampling Site Size Distribution (mi2)

		<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH,LRW,LWH	# Sites Sampled:	2	0	0	2

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	50.0	0.0	50.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	50.0	0.0	50.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.50	0.00	0.50

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
69.4	0.0	69.3

High Magnitude Causes

pH

High Magnitude Sources

Surface Mining

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 3 Scheduled Monitoring: 2009

A TMDL, in collaboration with an ODNr AMDAP project, is in progress for the Sunday Creek watershed. Monitoring in support of the TMDL/AMDAP projects was conducted by the Ohio EPA in 2001.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05030204 080	Hocking River (downstream Monday Creek to Athens/RM 33.1); excluding Hocking R.102.4 mainstem	

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0
<u>High Magnitude Causes</u>			<u>High Magnitude Sources</u>		

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
 >5000 colonies/100 ml. fecal coliform bacteria:
 >576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 Priority: Scheduled Monitoring: 2004

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment.

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
05030204 090	Federal Creek	144.6

Aquatic Life Use Assessment

Sampling Year(s): 1995	<u>Sampling Site Size Distribution (mi2)</u>			
	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH,LWH	# Sites Sampled: 7	2	0	0

Impairment? No	<u>% Attainment</u>		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	100.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

<u>AU Score</u> (relative amount of attainment)			<u>Weighted AU Score</u> (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
1.00	0.00	0.00	144.6	0.0	0.0
<u>High Magnitude Causes</u>			<u>High Magnitude Sources</u>		

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
 >5000 colonies/100 ml. fecal coliform bacteria:
 >576 colonies/100 ml. E. coli bacteria):
 # Sites in AU w/ Bacteria Violations:
 Total # Bacteria Sites in AU: 0
 Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 2 Priority: Scheduled Monitoring: 2004

All data were collected from tributaries located in the upper portion of the watershed.

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
05030204 100	Hocking River (downstream Athens/RM 33.1 to mouth); excluding Federal Creek and 109.7 Hocking R. mainstem	

Aquatic Life Use Assessment

Sampling Year(s):		<u>Sampling Site Size Distribution (mi2)</u>			
		<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH	# Sites Sampled:	0	0	0	0

Impairment? Unknown		<u>% Attainment</u>		
		Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):		0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):		0.0	0.0	0.0

<u>AU Score</u> (relative amount of attainment)			<u>Weighted AU Score</u> (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0
<u>High Magnitude Causes</u>			<u>High Magnitude Sources</u>		

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
 >5000 colonies/100 ml. fecal coliform bacteria:
 >576 colonies/100 ml. E. coli bacteria):
 # Sites in AU w/ Bacteria Violations:
 Total # Bacteria Sites in AU: 0
 Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 Priority: Scheduled Monitoring: 2004

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment. Very little data have been collected on tributaries within the lower Hocking River basin.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05040001 010	Tuscarawas River (headwaters to downstream Wolf Creek)	151.0

Aquatic Life Use Assessment

Sampling Year(s): 1993

Sampling Year(s): 1993	Sampling Site Size Distribution (mi2)				
	<5	5-20	20-50	>50	
Aquatic Life Use(s): WWH,MWH-C	# Sites Sampled:	1	1	1	3

Impairment? Yes

		% Attainment		
		Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):		0.0	50.0	50.0
Large Streams/Rivers (sites w/>50 mi2 drainage):		0.0	47.1	52.9

AU Score
(relative amount of attainment)

Full	Partial	Non
0.00	0.49	0.51

High Magnitude Causes

Unknown Toxicity
Siltation
Flow Alteration
Other Habitat Alterations

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.0	73.2	77.8

High Magnitude Sources

Urban Runoff/Storm Sewers (NPS)
Landfills
Channelization - Development
Dam Construction - Development

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 0

Total # Bacteria Sites in AU: 1

Other:

Impairment? Indeterminate

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for the Tuscarawas River (Channel Catfish, Smallmouth Bass, Yellow Bullhead). The area under the advisory is from St. Rt. 619 (Turkeyfoot Rd.) in Barberton to St. Rt. 416 (South Broadway St.) in New Philadelphia. Additionally, a "One Meal Every 2 Months" advisory (Carp), and a "One Meal per Week" advisory (Largemouth Bass, Rock Bass) are in effect for the same stretch of the river.

Integrated Report Assessment Category: 5 Priority: 2 Scheduled Monitoring: 2003

Most of the recent data collected in this watershed are from the Tuscarawas River mainstem and the lower portion of Wolf Creek.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05040001 020	Chippewa Creek	187.6

Aquatic Life Use Assessment

Sampling Year(s): 1998

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH,MWH-C				
# Sites Sampled:	3	2	7	2

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	12.5	58.3	29.2
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	42.9	57.1

AU Score
(relative amount of attainment)

Full	Partial	Non
0.06	0.51	0.43

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
11.8	94.9	80.9

High Magnitude Causes

Cause Unknown
Nutrients
Organic Enrichment/DO
Suspended Solids

High Magnitude Sources

Major Industrial Point Source
Major Municipal Point Source
Channelization - Agriculture
Source Unknown

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 0

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 0

Total # Bacteria Sites in AU: 11

Other:

Impairment? Indeterminate

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 2

Scheduled Monitoring: 2003

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05040001 030	Tuscarawas River (downstream Wolf Creek to downstream Sippo Creek); excluding Chippewa Creek	169.5

Aquatic Life Use Assessment

Sampling Year(s): 1992, 1993

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH,MWH-C				
# Sites Sampled:	2	3	1	4

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	29.2	0.0	70.8
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	100.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.15	0.00	0.85

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
24.7	0.0	144.8

High Magnitude Causes

Cause Unknown
Unknown Toxicity
Flow Alteration
Other Habitat Alterations

High Magnitude Sources

Landfills
Onsite Wastewater Systems (Septic Tanks)
Channelization - Development
Upstream Impoundment
Source Unknown

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for the Tuscarawas River (Channel Catfish, Smallmouth Bass, Yellow Bullhead). The area under the advisory is from St. Rt. 619 (Turkeyfoot Rd.) in Barberton to St. Rt. 416 (South Broadway St.) in New Philadelphia. Additionally, a "One Meal Every 2 Months" advisory (Carp), and a "One Meal per Week" advisory (Largemouth Bass, Rock Bass) are in effect for the same stretch of the river.

Integrated Report Assessment Category: 5 Priority: 2 Scheduled Monitoring: 2003

Most of the recent data collected in this watershed are from the Tuscarawas River mainstem. Virtually no data have been collected on any of the tributaries.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05040001 040	Sandy Creek (headwaters to downstream Still Fork)	134.5

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0

High Magnitude Causes

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 0

Total # Bacteria Sites in AU: 2

Other:

Impairment? Indeterminate

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for Sandy Creek (Carp). The area under the advisory includes the entire length of the stream.

Integrated Report Assessment Category: 3

Priority:

Scheduled Monitoring: 2012

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment. The upper portion of Sandy Creek was sampled by Ohio EPA Division of Emergency and Remedial Response, but the rest of the basin has virtually no data.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05040001 050	Nimishillen Creek	187.9

Aquatic Life Use Assessment

Sampling Year(s): 1998

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH,MWH-C,LRW				
# Sites Sampled:	4	6	9	8

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	36.1	27.8	36.1
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	61.9	38.1

AU Score
(relative amount of attainment)

Full	Partial	Non
0.18	0.45	0.37

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
34.0	84.2	69.7

High Magnitude Causes

Cause Unknown Flow Alteration
Metals Pathogens
Zinc
Unionized Ammonia
Nutrients
pH
Organic Enrichment/DO
Thermal Modifications

High Magnitude Sources

Major Industrial Point Source
Minor Industrial Point Source
Major Municipal Point Source
Nonirrigated Crop Production
Source Unknown

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 6

>576 colonies/100 ml. E. coli bacteria: 3

Sites in AU w/ Bacteria Violations: 4

Total # Bacteria Sites in AU: 23

Other:

Impairment? Yes

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for Nimishillen Creek (Carp). The area under the advisory includes the entire length of the stream.

Integrated Report Assessment Category: 5

Priority: 9

Scheduled Monitoring: 2003

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05040001 060	Sandy Creek (downstream Still Fork to mouth); excluding Nimishillen Creek	181.1

Aquatic Life Use Assessment

Sampling Year(s): 1993, 1996, 1997, 1998

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH				
# Sites Sampled:	0	0	0	8

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	13.3	53.1	33.6

AU Score
(relative amount of attainment)

Full	Partial	Non
0.13	0.53	0.34

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
24.1	96.2	60.8

High Magnitude Causes

Unknown Toxicity

High Magnitude Sources

Municipal Point Source
Source Unknown

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 0

Total # Bacteria Sites in AU: 2

Other:

Impairment? Indeterminate

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for Sandy Creek (Carp). The area under the advisory includes the entire length of the stream.

Integrated Report Assessment Category: 5 Priority: 2 Scheduled Monitoring: 2012

The upper portion of Sandy Creek was sampled by Ohio EPA Division of Emergency and Remedial Response, but the rest of the watershed has virtually no data.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05040001 070	Conotton Creek (headwaters to downstream McGuire Creek)	141.8

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0
<u>High Magnitude Causes</u>			<u>High Magnitude Sources</u>		

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
 >5000 colonies/100 ml. fecal coliform bacteria:
 >576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 **Priority:** **Scheduled Monitoring: 2012**

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment. The last major Ohio EPA survey done within this watershed was in 1982. Only two biological reference sites have been sampled since then.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05040001 080	Conotton Creek (downstream McGuire Creek to mouth)	144.3

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0

High Magnitude Causes

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
>5000 colonies/100 ml. fecal coliform bacteria:
>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 **Priority:** **Scheduled Monitoring: 2012**

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment. The last major Ohio EPA survey done within this watershed was in 1982. Only one biological reference site has been sampled since then. Conotton Creek is currently listed on the 303(d) list, but data from 1982 are not adequate to justify keeping it on the list. Another survey of this stream is needed to reassess the status.

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
05040001 090	Tuscarawas River (downstream Sippo Creek to upstream Sugar Creek); excluding Tuscarawas R. mainstem	113.4

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled:	0	0	0

Impairment? Unknown	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0
<u>High Magnitude Causes</u>			<u>High Magnitude Sources</u>		

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
 >5000 colonies/100 ml. fecal coliform bacteria:
 >576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 Priority: Scheduled Monitoring: 2003

Most of the recent data in this watershed are from the Tuscarawas River mainstem, focusing on a hazardous waste site located on a small tributary.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05040001 100	Sugar Creek (headwaters to upstream Middle Fork)	97.3

Aquatic Life Use Assessment

Sampling Year(s): 1998

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	1	7	2	3
# Sites Sampled:	1	7	2	3

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	53.5	7.2	39.3
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	100.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.27	0.03	0.70

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
26.1	3.5	67.7

High Magnitude Causes

Nutrients
Siltation
Organic Enrichment/DO
Other Habitat Alterations
Pathogens
Natural Limits (Wetlands)

High Magnitude Sources

Nonirrigated Crop Production
Pasture Land
Feedlots (Confined Animal Feeding Oper.)
Animal Holding/Management Areas
Onsite Wastewater Systems (Septic Tanks)
Channelization - Agriculture
Removal of Riparian Vegetation - Ag.
Streambank Destabilization - Ag.

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 28

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 11

Total # Bacteria Sites in AU: 12

Other:

Impairment? Yes

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 8 Scheduled Monitoring: 2012

A TMDL is in progress for the Sugar Creek watershed. Monitoring in support of the TMDL was conducted in 1998.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05040001 110	South Fork Sugar Creek	137.7

Aquatic Life Use Assessment

Sampling Year(s): 1998

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): WWH

	<5	5-20	20-50	>50
# Sites Sampled:	14	15	4	4

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	3.4	47.6	49.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	25.9	74.1

AU Score
(relative amount of attainment)

Full	Partial	Non
0.02	0.37	0.61

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
2.3	50.6	84.8

High Magnitude Causes

Cause Unknown	Other Habitat Alterations
Iron	Natural Limits (Wetlands)
Unionized Ammonia	
Nutrients	
pH	
Siltation	
Organic Enrichment/DO	
Flow Alteration	

High Magnitude Sources

Minor Industrial Point Source	Streambank Destabilization - Ag.
Nonirrigated Crop Production	Natural
Pasture Land	Source Unknown
Surface Mining	
Industrial Land Treatment	
Channelization - Agriculture	
Flow Regulation/ Modification - Ag.	
Removal of Riparian Vegetation - Ag.	

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 21

>576 colonies/100 ml. E. coli bacteria:

Sites in AU w/ Bacteria Violations: 16

Total # Bacteria Sites in AU: 25

Other:

Impairment? Yes

Fish Consumption Assessment

Integrated Report Assessment Category: 5 **Priority: 8** **Scheduled Monitoring: 2012**

A TMDL is in progress for the Sugar Creek watershed. Monitoring in support of the TMDL was conducted in 1998.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05040001 120	Sugar Creek (upstream Middle Fork to mouth); excluding South Fork	121.3

Aquatic Life Use Assessment

Sampling Year(s): 1998	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled: 7	9	2	8

Impairment? Yes

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	46.8	27.8	25.4
Large Streams/Rivers (sites w/>50 mi2 drainage):	10.3	46.1	43.6

AU Score (relative amount of attainment)		
Full	Partial	Non
0.28	0.37	0.35

Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non
34.6	44.9	41.8

High Magnitude Causes

Unknown Toxicity
Metals
pH
Siltation
Other Habitat Alterations
Natural Limits (Wetlands)

High Magnitude Sources

Major Industrial Point Source
Nonirrigated Crop Production
Pasture Land
Surface Mining
Landfills
Channelization - Agriculture
Flow Reg./Mod. - Ag.
Removal of Riparian Vegetation - Ag.
Streambank Destabilization - Ag.
Natural

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 13

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 10

Total # Bacteria Sites in AU: 26

Other:

Impairment? Yes

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 8 Scheduled Monitoring: 2012

A TMDL is in progress for the Sugar Creek watershed. Monitoring in support of the TMDL was conducted in 1998.

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
05040001 130	Tuscarawas River (downstream Sugar Cr. to upstream Stillwater Cr.); excluding Tuscarawas R. mainstem	100.1

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0

High Magnitude Causes

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3

Priority:

Scheduled Monitoring: 2003

No data from tributaries within this watershed have ever been collected.

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
05040001 140	Stillwater Creek (headwaters to downstream Boggs Fork)	122.1

Aquatic Life Use Assessment

Sampling Year(s):	<u>Sampling Site Size Distribution (mi2)</u>			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH,LWH	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	<u>% Attainment</u>		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

<u>AU Score</u> (relative amount of attainment)			<u>Weighted AU Score</u> (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0
<u>High Magnitude Causes</u>			<u>High Magnitude Sources</u>		

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
 >5000 colonies/100 ml. fecal coliform bacteria:
 >576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 Priority: Scheduled Monitoring: 2007

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment. The only data are from two small streams in a reclaimed mining area owned by Ohio Department of Natural Resources, sampled in 2000.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05040001 150	Stillwater Creek (downstream Boggs Fork to downstream Brushy Fork)	159.1

Aquatic Life Use Assessment

Sampling Year(s): 1992, 1998

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): WWH,LWH

Sites Sampled:

<5	5-20	20-50	>50
0	10	1	4

Impairment? Yes

% Attainment

Small Streams (sites w/<50 mi2 drainage):

Large Streams/Rivers (sites w/>50 mi2 drainage):

Full	Partial	Non
20.0	5.0	75.0
33.0	67.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.27	0.36	0.37

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
42.5	56.9	59.7

High Magnitude Causes

Nonirrigated Crop Production
Siltation
Other Habitat Alterations

High Magnitude Sources

Surface Mining
Flow Regulation/Modification
Range Grazing - Riparian
Pasture Land
Channelization - Ag

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria:

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 1

Scheduled Monitoring: 2007

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05040001 160	Little Stillwater Creek	111.0

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.00	0.00	0.00

High Magnitude Causes

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.0	0.0	0.0

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
>5000 colonies/100 ml. fecal coliform bacteria:
>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 Priority: Scheduled Monitoring: 2007

There has only been one biological sample (macroinvertebrates, 1983) collected in the entire Little Stillwater Creek basin.

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
05040001 170	Stillwater Creek (downstream Brushy Fork to mouth); excluding Little Stillwater Creek	92.7

Aquatic Life Use Assessment

Sampling Year(s):	<u>Sampling Site Size Distribution (mi2)</u>			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled: 0	0	0	0

Impairment? Unknown	<u>% Attainment</u>		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

<u>AU Score</u> (relative amount of attainment)			<u>Weighted AU Score</u> (relative amount of attainment weighted by AU size)		
<u>Full</u>	<u>Partial</u>	<u>Non</u>	<u>Full</u>	<u>Partial</u>	<u>Non</u>
0.00	0.00	0.00	0.0	0.0	0.0
<u>High Magnitude Causes</u>			<u>High Magnitude Sources</u>		

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
 >5000 colonies/100 ml. fecal coliform bacteria: 1
 >576 colonies/100 ml. E. coli bacteria:
 # Sites in AU w/ Bacteria Violations: 1
 Total # Bacteria Sites in AU: 1
 Other:

Impairment? Indeterminate

Fish Consumption Assessment

Integrated Report Assessment Category: 3 Priority: Scheduled Monitoring: 2007

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment. There has been limited sampling on the lower portion of the Stillwater Creek mainstem. No data have been collected in any of the tributaries within this watershed.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05040001 180	Tuscarawas River (downstream Stillwater Cr. to upstream Evans Cr.); excluding Tuscarawas R. mainstem	124.7

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.00	0.00	0.00

High Magnitude Causes

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.0	0.0	0.0

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
 >5000 colonies/100 ml. fecal coliform bacteria:
 >576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 Priority: Scheduled Monitoring: 2003

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment. Only a few sites have been sampled since 1989. Several biological reference sites have been sampled on the Tuscarawas mainstem, but data from tributaries is lacking.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05040001 190	Tuscarawas River (upstream Evans Creek to mouth); excluding Tuscarawas R. mainstem	116.4

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0
<u>High Magnitude Causes</u>			<u>High Magnitude Sources</u>		

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
 >5000 colonies/100 ml. fecal coliform bacteria:
 >576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 **Priority:** **Scheduled Monitoring: 2003**

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment. Only a few sites have been sampled since 1989. Several biological reference sites have been sampled on the Tuscarawas mainstem, but data from tributaries is lacking.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05040002 010	Black Fork Mohican River (headwaters to downstream Whetstone Creek)	161.4

Aquatic Life Use Assessment

Sampling Year(s): 1998

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): WWH

	<5	5-20	20-50	>50
# Sites Sampled:	2	0	4	5

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	50.0	50.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	33.3	41.7	25.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.42	0.46	0.12

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
67.3	73.9	20.2

High Magnitude Causes

Unknown Toxicity
Nutrients
Siltation
Other Habitat Alterations

High Magnitude Sources

Major Industrial Point Source
Urban Runoff/Storm Sewers (NPS)
Channelization - Agriculture
Channelization - Development
Removal of Riparian Vegetation - Dev.
Contaminated Sediments

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 1

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 1

Total # Bacteria Sites in AU: 10

Other:

Impairment? Indeterminate

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 4

Scheduled Monitoring: 2007

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
05040002 020	Black Fork Mohican River (downstream Whetstone Creek to downstream Rocky Fork)	139.7

Aquatic Life Use Assessment

Sampling Year(s): 1993, 1994, 1998

Sampling Site Size Distribution (mi2)

		<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled:	8	4	2	5

Impairment? Yes

% Attainment

	<u>Full</u>	<u>Partial</u>	<u>Non</u>
Small Streams (sites w/<50 mi2 drainage):	9.4	9.4	81.2
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	100.0	0.0

AU Score
(relative amount of attainment)

<u>Full</u>	<u>Partial</u>	<u>Non</u>
0.05	0.55	0.40

Weighted AU Score
(relative amount of attainment weighted by AU size)

<u>Full</u>	<u>Partial</u>	<u>Non</u>
6.6	76.4	56.7

High Magnitude Causes

Priority Organics
Metals
Nutrients
Organic Enrichment/DO
Other Habitat Alterations

High Magnitude Sources

Major Industrial Point Source
Major Municipal Point Source
Domestic Wastewater Lagoon
Urban Runoff/Storm Sewer (NPS)
Onsite Wastewater Systems (Septic Tanks)
Hydromodification - Development
Channelization - Development

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 6

>576 colonies/100 ml. E. coli bacteria:

Sites in AU w/ Bacteria Violations: 6

Total # Bacteria Sites in AU: 6

Other:

Impairment? Yes

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 8

Scheduled Monitoring: 2007

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05040002 030	Clear Fork Mohican River (headwaters to downstream Cedar Fork)	112.1

Aquatic Life Use Assessment

Sampling Year(s): 1998, 1999

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): CWH,WWH				
# Sites Sampled:	1	1	3	4

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	100.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	80.0	20.0	0.0

AU Score
(relative amount of attainment)

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.90	0.10	0.00

Full	Partial	Non
100.9	11.2	0.0

High Magnitude Causes

High Magnitude Sources

Unknown Cause

Unknown Source

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 0

Total # Bacteria Sites in AU: 5

Other:

Impairment? Indeterminate

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 3

Scheduled Monitoring: 2012

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
05040002 040	Clear Fork Mohican River (downstream Cedar Fork to mouth)	105.3

Aquatic Life Use Assessment

Sampling Year(s): 1998

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): CWH,WWH				
# Sites Sampled:	0	0	0	5

Impairment? No

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	100.0	0.0	0.0

AU Score
(relative amount of attainment)

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
1.00	0.00	0.00

Full	Partial	Non
105.3	0.0	0.0

High Magnitude Causes

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 0

Total # Bacteria Sites in AU: 7

Other:

Impairment? No

Fish Consumption Assessment

Integrated Report Assessment Category: 1

Priority:

Scheduled Monitoring: 2012

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05040002 050	Jerome Fork Mohican River	161.5

Aquatic Life Use Assessment

Sampling Year(s): 1998

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH,LRW				
# Sites Sampled:	1	4	3	7

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	100.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	76.4	23.6	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.88	0.12	0.00

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
142.4	19.1	0.0

High Magnitude Causes

Nutrients

High Magnitude Sources

Major Municipal Point Source

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 0

Total # Bacteria Sites in AU: 12

Other:

Impairment? Indeterminate

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 3

Scheduled Monitoring: 2007

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
05040002 060	Muddy Fork Mohican River	105.3

Aquatic Life Use Assessment

Sampling Year(s):	<u>Sampling Site Size Distribution (mi2)</u>				
	<5	5-20	20-50	>50	
Aquatic Life Use(s): WWH	# Sites Sampled:	0	0	0	0
Impairment? Unknown		% Attainment			
		Full	Partial	Non	
Small Streams (sites w/<50 mi2 drainage):		0.0	0.0	0.0	
Large Streams/Rivers (sites w/>50 mi2 drainage):		0.0	0.0	0.0	

AU Score (relative amount of attainment)	Weighted AU Score (relative amount of attainment weighted by AU size)
Full Partial Non	Full Partial Non
0.00 0.00 0.00	0.0 0.0 0.0
<u>High Magnitude Causes</u>	<u>High Magnitude Sources</u>

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
 >5000 colonies/100 ml. fecal coliform bacteria:
 >576 colonies/100 ml. E. coli bacteria):
 # Sites in AU w/ Bacteria Violations:
 Total # Bacteria Sites in AU: 0
 Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 Priority: Scheduled Monitoring: 2012

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment. Only two biological reference sites on the Muddy Fork mainstem, and one site on Redhaw Creek have been sampled..

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
05040002 070	Lake Fork Mohican River	79.8

Aquatic Life Use Assessment

Sampling Year(s):	<u>Sampling Site Size Distribution (mi2)</u>			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	<u>% Attainment</u>		
	<u>Full</u>	<u>Partial</u>	<u>Non</u>
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

<u>AU Score</u> (relative amount of attainment)			<u>Weighted AU Score</u> (relative amount of attainment weighted by AU size)		
<u>Full</u>	<u>Partial</u>	<u>Non</u>	<u>Full</u>	<u>Partial</u>	<u>Non</u>
0.00	0.00	0.00	0.0	0.0	0.0

High Magnitude Causes

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
 >5000 colonies/100 ml. fecal coliform bacteria:
 >576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 Priority: Scheduled Monitoring: 2012

No data of any type have ever been collected by the Ohio EPA within this watershed.

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
05040002 080	Mohican River; Black Fork Mohican R. (downstream Rocky Fork to mouth); excluding 138.8 Mohican R. mainstem	

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0
<u>High Magnitude Causes</u>			<u>High Magnitude Sources</u>		

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
 >5000 colonies/100 ml. fecal coliform bacteria:
 >576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 Priority: Scheduled Monitoring: 2007

Only two sites on the lower portion of the Black Fork mainstem have been sampled since 1988.

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
05040003 010	Kokosing River (headwaters to upstream North Branch)	100.5

Aquatic Life Use Assessment

Sampling Year(s): 1998

	<u>Sampling Site Size Distribution (mi2)</u>			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled: 0	1	2	2

Impairment? Yes

	<u>% Attainment</u>		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	25.0	75.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	100.0	0.0	0.0

<u>AU Score</u> (relative amount of attainment)			<u>Weighted AU Score</u> (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.63	0.37	0.00	62.8	37.7	0.0
<u>High Magnitude Causes</u>			<u>High Magnitude Sources</u>		

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 4 Scheduled Monitoring: 2012

Only biological reference sites have been sampled since 1987.

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
05040003 020	North Branch Kokosing River	97.9

Aquatic Life Use Assessment

Sampling Year(s): 1998

Sampling Site Size Distribution (mi2)

		<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled:	0	2	1	3

Impairment? No

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	100.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	100.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
1.00	0.00	0.00

High Magnitude Causes

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
97.9	0.0	0.0

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
 >5000 colonies/100 ml. fecal coliform bacteria:
 >576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 2 Priority: Scheduled Monitoring: 2012

There is sufficient coverage on the North Branch mainstem, but there are no data from any tributaries within the watershed.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05040003 030	Kokosing River (downstream North Branch to upstream Jelloway Creek)	179.9

Aquatic Life Use Assessment

Sampling Year(s): 1998

Aquatic Life Use(s): EWH,WWH	# Sites Sampled:	Sampling Site Size Distribution (mi2)			
		<5	5-20	20-50	>50
		0	0	1	5

Impairment? Yes

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	100.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	94.6	0.0	5.4

AU Score (relative amount of attainment)		
Full	Partial	Non
0.47	0.50	0.03

Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non
85.1	90.0	4.8

High Magnitude Causes

Cause Unknown
Organic Enrichment/DO

High Magnitude Sources

Natural
Source Unknown

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 0

Total # Bacteria Sites in AU: 1

Other:

Impairment? Indeterminate

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 4 Scheduled Monitoring: 2012

Only biological reference sites have been sampled since 1987.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05040003 040	Kokosing River (upstream Jelloway Creek to mouth)	106.3

Aquatic Life Use Assessment

Sampling Year(s): 1998

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): EWH,WWH

Sites Sampled:

<5	5-20	20-50	>50
2	1	2	3

Impairment? Yes

% Attainment

Small Streams (sites w/<50 mi2 drainage):

Large Streams/Rivers (sites w/>50 mi2 drainage):

Full	Partial	Non
37.5	25.0	37.5
100.0	0.0	0.0

AU Score
(relative amount of attainment)

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.69	0.12	0.19

Full	Partial	Non
73.1	13.3	19.9

High Magnitude Causes

Unknown Cause
Flow Alteration

High Magnitude Sources

Unknown Source
Pasture Land
Other Urban Runoff
Upstream Impoundment

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 3

Scheduled Monitoring: 2012

Only biological reference sites have been sampled since 1987.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05040003 050	Killbuck Creek (headwaters to upstream Apple Creek)	138.6

Aquatic Life Use Assessment

Sampling Year(s): 1993, 1998

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): WWH,LRW

Sites Sampled:

<5	5-20	20-50	>50
1	3	2	4

Impairment? Yes

% Attainment

Small Streams (sites w/<50 mi2 drainage):

Large Streams/Rivers (sites w/>50 mi2 drainage):

Full	Partial	Non
0.0	75.0	25.0
88.2	11.8	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.44	0.43	0.13

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
61.1	60.2	17.3

High Magnitude Causes

Organic Enrichment/DO
Other Habitat Alterations

High Magnitude Sources

Nonirrigated Crop Production
Feedlots (Confined Animal Feeding Oper.)
Channelization - Agriculture
Natural

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 4 Scheduled Monitoring: 2007

Most of the sampling in this watershed has been on the Killbuck Creek mainstem. A few tributaries were sampled in 1983, and a few new ones were added in 1993, but the extent of coverage is very spread out. Only biological reference sites have been sampled since 1993.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05040003 060	Killbuck Creek (upstream Apple Creek to downstream Salt Creek)	171.1

Aquatic Life Use Assessment

Sampling Year(s): 1993

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH				
# Sites Sampled:	0	4	1	8

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	87.5	0.0	12.5
Large Streams/Rivers (sites w/>50 mi2 drainage):	30.3	25.0	44.7

AU Score
(relative amount of attainment)

Full	Partial	Non
0.59	0.12	0.29

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
100.8	21.4	48.9

High Magnitude Causes

Organic Enrichment/DO
Other Habitat Alterations

High Magnitude Sources

Channelization - Agriculture
Natural

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 3 Scheduled Monitoring: 2007

Most of the sampling in this watershed has been on the Killbuck Creek mainstem. A few tributaries were sampled in 1983, and a few new ones were added in 1985 and 1993, but the extent of coverage is very spread out. Only biological reference sites have been sampled since 1993. Four small unnamed wetland streams which flow into Killbuck Creek are currently listed on the 303(d) list, but data from 1985 are not adequate to justify keeping them on the list. Another survey of these

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05040003 070	Killbuck Creek (downstream Salt Creek to downstream Black Creek)	151.9

Aquatic Life Use Assessment

Sampling Year(s): 1993, 1997

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH				
# Sites Sampled:	0	2	1	1

Impairment? No

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	100.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	100.0	0.0	0.0

AU Score
(relative amount of attainment)

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
1.00	0.00	0.00

Full	Partial	Non
151.9	0.0	0.0

High Magnitude Causes

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
>5000 colonies/100 ml. fecal coliform bacteria:
>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 2 Priority: Scheduled Monitoring: 2007

Most of the sampling in this watershed has been on the Killbuck Creek mainstem. A few tributaries were sampled in 1983, and a few new ones were added in 1993, but the extent of coverage is very spread out. Only biological reference sites have been sampled since 1993.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05040003 080	Killbuck Creek (downstream Black Creek to mouth)	146.9

Aquatic Life Use Assessment

Sampling Year(s): 1993, 1997

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): EWH,WWH

Sites Sampled:

<5	5-20	20-50	>50
1	5	1	2

Impairment? Yes

% Attainment

Small Streams (sites w/<50 mi2 drainage):

Large Streams/Rivers (sites w/>50 mi2 drainage):

Full	Partial	Non
50.0	50.0	0.0
85.7	14.3	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.68	0.32	0.00

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
99.6	47.3	0.0

High Magnitude Causes

Cause Unknown
Organic Enrichment

High Magnitude Sources

Onsite Wastewater Systems (Septic Tanks)
Source Unknown

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 1

>576 colonies/100 ml. E. coli bacteria: 1

Sites in AU w/ Bacteria Violations: 1

Total # Bacteria Sites in AU: 1

Other:

Impairment? Indeterminate

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 4 Scheduled Monitoring: 2007

Most of the sampling in this watershed has been on the Killbuck Creek mainstem. A few tributaries were sampled in 1983, and a few new ones were added in 1993, but the extent of coverage is very spread out. Only biological reference sites have been sampled since 1993.

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
05040003 090	Walhonding River; excluding Killbuck Creek and Walhonding R. mainstem	157.3

Aquatic Life Use Assessment

Sampling Year(s): 1994

Sampling Site Size Distribution (mi2)

		<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH,LWH	# Sites Sampled:	0	5	1	0

Impairment? No

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	100.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
1.00	0.00	0.00

High Magnitude Causes

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
157.3	0.0	0.0

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 2 Priority: Scheduled Monitoring: 2007

All sites on tributaries draining to the Walhonding River were in full attainment of biological criteria.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05040004 010	Muskingum River(downstream Tuscarawas R./Walhonding R. to upstream Licking River)	130.9

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0
<u>High Magnitude Causes</u>			<u>High Magnitude Sources</u>		

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
>5000 colonies/100 ml. fecal coliform bacteria:
>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 **Priority:** **Scheduled Monitoring: 2008**

Virtually nothing has been sampled in this watershed. A few 401 issues were sampled on very small tributaries.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05040004 020	Wakatomika Creek (headwaters to downstream Brushy Fork)	118.1

Aquatic Life Use Assessment

Sampling Year(s): 1994, 1997, 1998

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH				
# Sites Sampled:	0	5	1	0

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	90.0	0.0	10.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score
(relative amount of attainment)

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.90	0.00	0.10

Full	Partial	Non
106.3	0.0	11.8

High Magnitude Causes

High Magnitude Sources

Natural Limits (Wetlands)

Natural

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 2

Scheduled Monitoring: 2003

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
05040004 030	Wakatomika Creek (downstream Brushy Fork to mouth)	116.1

Aquatic Life Use Assessment

Sampling Year(s): 1994, 1996, 1997

Sampling Site Size Distribution (mi2)

		<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH,LWH	# Sites Sampled:	0	2	0	6

Impairment? Yes

% Attainment

	<u>Full</u>	<u>Partial</u>	<u>Non</u>
Small Streams (sites w/<50 mi2 drainage):	50.0	0.0	50.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	81.0	19.0	0.0

AU Score
(relative amount of attainment)

<u>Full</u>	<u>Partial</u>	<u>Non</u>
0.66	0.09	0.25

Weighted AU Score
(relative amount of attainment weighted by AU size)

<u>Full</u>	<u>Partial</u>	<u>Non</u>
76.1	11.0	29.0

High Magnitude Causes

High Magnitude Sources

Siltation

Other Habitat Alterations

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 3

Scheduled Monitoring: 2003

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05040004 040	Jonathan Creek	193.9

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH,LRW,LWH # Sites Sampled:	0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0

High Magnitude Causes

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 0

Total # Bacteria Sites in AU: 1

Other:

Impairment? Indeterminate

Fish Consumption Assessment

Integrated Report Assessment Category: 3 Priority: Scheduled Monitoring: 2008

Virtually no biological sampling has been done in the Moxahala Creek watershed due to severe mining impacts and lack of WWTPs in the basin. Only one biological reference site on Jonathan Creek has been sampled recently. Fish tissue sampling was done on Moxahala Creek in 2000. Kent Run and Jonathan Creek are currently listed on the 303(d) list, but data from 1986 are not adequate to justify keeping them on the list. Another survey of these streams is needed to reassess

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05040004 050	Moxahala Creek (excluding Jonathan Creek)	108.4

Aquatic Life Use Assessment

Sampling Year(s): 1987, 1989, 1998, 1999

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): WWH,LRW,LWH

Sites Sampled:

<5	5-20	20-50	>50
2	6	0	0

Impairment? Yes

% Attainment

Small Streams (sites w/<50 mi2 drainage):

Large Streams/Rivers (sites w/>50 mi2 drainage):

Full	Partial	Non
25.0	8.3	66.7
0.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.25	0.08	0.67

High Magnitude Causes

pH
Siltation
Flow Alteration
Other Habitat Alterations

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
27.1	8.7	72.6

High Magnitude Sources

Surface Mining
Subsurface Mining
Channelization - Development
Natural

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 1 Scheduled Monitoring: 2008

Black Fork and Ogg Creek were included on the 1998 303(d) list based on data from 1987. Since these data are no longer current (i.e., more than 10 years old), reassessment of current conditions is warranted. However, recognizing the continued pervasive impacts related to ongoing mining activities, retaining the Assessment Unit on the 303(d) list is appropriate. Additional data collected in 1989, 1998 and 1999 were used to supplement the assessment of this AU.

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
05040004 060	Salt Creek	144.8

Aquatic Life Use Assessment

Sampling Year(s):	<u>Sampling Site Size Distribution (mi2)</u>			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	<u>% Attainment</u>		
	<u>Full</u>	<u>Partial</u>	<u>Non</u>
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

<u>AU Score</u> (relative amount of attainment)			<u>Weighted AU Score</u> (relative amount of attainment weighted by AU size)		
<u>Full</u>	<u>Partial</u>	<u>Non</u>	<u>Full</u>	<u>Partial</u>	<u>Non</u>
0.00	0.00	0.00	0.0	0.0	0.0

High Magnitude Causes

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
 >5000 colonies/100 ml. fecal coliform bacteria:
 >576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 Priority: Scheduled Monitoring: 2008

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment. Two sites were sampled on Salt Creek, but data are lacking from the entire basin.

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
05040004 070	Muskingum River (downstream Licking R. to upstream Meigs Cr.); excluding Muskingum R. mainstem	182.1

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH,LWH	# Sites Sampled:	0	0	0

Impairment? Unknown

		% Attainment		
		Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):		0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):		0.0	0.0	0.0

AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0

High Magnitude Causes

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
 >5000 colonies/100 ml. fecal coliform bacteria:
 >576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3

Priority:

Scheduled Monitoring: 2008

No data have been collected in tributaries within this watershed.

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
05040004 080	Meigs Creek	142.2

Aquatic Life Use Assessment

Sampling Year(s): 1989

Sampling Site Size Distribution (mi2)

		<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled:	0	0	2	1

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	50.0	50.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	100.0

AU Score
(relative amount of attainment)

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.00	0.25	0.75

Full	Partial	Non
0.0	35.6	106.6

High Magnitude Causes

High Magnitude Sources

Siltation

Surface Mining

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 1 Scheduled Monitoring: 2008

Meigs Creek and Dyes Fork were included on the 1998 303(d) list based on data from 1989. Since these data are no longer current (i.e., more than 10 years old), reassessment of current conditions is warranted. However, this Assessment Unit will remain listed until a TMDL has been completed.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05040004 090	Wolf Creek; West Branch Wolf Creek;	154.3

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.00	0.00	0.00

High Magnitude Causes

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.0	0.0	0.0

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 0

Total # Bacteria Sites in AU: 2

Other:

Impairment? No

Fish Consumption Assessment

Integrated Report Assessment Category: 2 Priority: Scheduled Monitoring: 2008

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment. Only two biological reference sites on the West Branch, and one site on Shrader Run have been recently sampled.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05040004 100	South Branch Wolf Creek	79.6

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)		
Full	Partial	Non
0.00	0.00	0.00

High Magnitude Causes

Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non
0.0	0.0	0.0

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
>5000 colonies/100 ml. fecal coliform bacteria:
>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 0

Total # Bacteria Sites in AU: 1

Other:

Impairment? Indeterminate

Fish Consumption Assessment

Integrated Report Assessment Category: 3 **Priority:** **Scheduled Monitoring: 2008**

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment. The only data within this basin is from one biological reference site on the South Branch.

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
05040004 110	Muskingum River (downstream Meigs Creek to upstream Big Run); excluding Muskingum R. mainstem	104.2

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH,LWH	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0

High Magnitude Causes

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 0

Total # Bacteria Sites in AU: 1

Other:

Impairment? Indeterminate

Fish Consumption Assessment

Integrated Report Assessment Category: 3 Priority: Scheduled Monitoring: 2008

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment. One reference site on Olive Green Creek near the mouth was sampled in 1999. Three sites were sampled in the headwaters in 1998 related to a 401 mining project. None of these sites achieve the inferred EWH Aquatic Life Use designation. A use attainability analysis is necessary before impairment can be determined.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05040004 120	Muskingum River (upstream Big Run to mouth); excluding Muskingum R. mainstem	90.2

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0

High Magnitude Causes

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 Priority:

Scheduled Monitoring: 2008

Tributaries within this watershed have no data of any kind.

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
05040005 010	Seneca Fork	150.5

Aquatic Life Use Assessment

Sampling Year(s):	<u>Sampling Site Size Distribution (mi2)</u>			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	<u>% Attainment</u>		
	<u>Full</u>	<u>Partial</u>	<u>Non</u>
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

<u>AU Score</u> (relative amount of attainment)			<u>Weighted AU Score</u> (relative amount of attainment weighted by AU size)		
<u>Full</u>	<u>Partial</u>	<u>Non</u>	<u>Full</u>	<u>Partial</u>	<u>Non</u>
0.00	0.00	0.00	0.0	0.0	0.0
<u>High Magnitude Causes</u>			<u>High Magnitude Sources</u>		

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
 >5000 colonies/100 ml. fecal coliform bacteria:
 >576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3

Priority:

Scheduled Monitoring: 2008

Biological monitoring of Seneca Fork has not been done since 1984. Fish tissue sampling was done in 1993 and 1994.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05040005 020	Wills Creek (headwaters to upstream Leatherwood Creek); excluding Seneca Fork	163.4

Aquatic Life Use Assessment

Sampling Year(s): 1994, 1999

Sampling Site Size Distribution (mi2)

		<5	5-20	20-50	>50
Aquatic Life Use(s): WWH,LRW,LWH	# Sites Sampled:	0	8	0	7

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	37.5	62.5
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	41.4	58.6

AU Score
(relative amount of attainment)

Full	Partial	Non
0.00	0.39	0.61

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.0	64.5	98.9

High Magnitude Causes

Metals
Unionized Ammonia
Siltation
Other Habitat Alterations

High Magnitude Sources

Surface Mining
Onsite Wastewater Systems (Septic Tanks)
Hazardous Waste
Natural

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 1

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 1

Total # Bacteria Sites in AU: 6

Other:

Impairment? Indeterminate

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 1 Scheduled Monitoring: 2008

Only biological reference sites have been sampled since 1987. However, mining impacts are so severe (sedimentation) that the mainstem and several of the headwaters tributaries are still representative of the majority of the basin.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05040005 030	Leatherwood Creek	91.6

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)				
	<5	5-20	20-50	>50	
Aquatic Life Use(s): WWH,LWH	# Sites Sampled:	0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)		
Full	Partial	Non
0.00	0.00	0.00

High Magnitude Causes

Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non
0.0	0.0	0.0

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
 >5000 colonies/100 ml. fecal coliform bacteria:
 >576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 0

Total # Bacteria Sites in AU: 1

Other:

Impairment? Indeterminate

Fish Consumption Assessment

Integrated Report Assessment Category: 3 **Priority:** **Scheduled Monitoring: 2008**

The Leatherwood Creek basin was sampled in 1984. Only one biological reference site on the mainstem near the mouth has been sampled since then. Leatherwood Creek, Mud Run, Hawkins Run and Infirmary Run are currently listed on the 303(d) list, but data from 1984 are not adequate to justify keeping them on the list. Another survey of these streams is needed to reassess the status.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05040005 040	Salt Fork	159.3

Aquatic Life Use Assessment

Sampling Year(s): 1994

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): WWH

	<5	5-20	20-50	>50
# Sites Sampled:	4	3	2	0

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	14.6	79.2	6.2
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.15	0.79	0.06

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
23.2	126.1	10.0

High Magnitude Causes

Siltation
Other Habitat Alterations

High Magnitude Sources

Pature Land
Range Grazing - Riparian
Range Grazing - Upland
Channelization - Agriculture

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 2

Scheduled Monitoring: 2008

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05040005 050	Wills Creek (downstream Leatherwood Cr. to downstream Birds Run); excluding Wills Creek mainstem	164.9

Aquatic Life Use Assessment

Sampling Year(s): 1994

Sampling Site Size Distribution (mi2)

		<5	5-20	20-50	>50
Aquatic Life Use(s): WWH,LWH	# Sites Sampled:	0	0	0	0

Impairment? Unknown

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.00	0.00	0.00

High Magnitude Causes

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.0	0.0	0.0

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3

Priority:

Scheduled Monitoring: 2008

The are no recent biological data from tributaries in this watershed. Fish tissue sampling was done on Crooked Creek in 2000. Crooked Creek is currently listed on the 303(d) list, but biological data from 1984 are not adequate to justify keeping it on the list. Another survey of this stream is needed to reassess the status.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05040005 060	Wills Creek (downstream Birds Run to mouth); excluding Wills Creek mainstem	122.9

Aquatic Life Use Assessment

Sampling Year(s): 1994

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH,LWH				
# Sites Sampled:	0	0	0	0

Impairment? Unknown

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score
(relative amount of attainment)

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.00	0.00	0.00

Full	Partial	Non
0.0	0.0	0.0

High Magnitude Causes

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3

Priority:

Scheduled Monitoring: 2008

The are no data from tributaries within this watershed.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05040006 010	North Fork Licking River (headwaters to downstream Sycamore Creek)	111.4

Aquatic Life Use Assessment

Sampling Year(s): 1993, 1998-2001

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH				
# Sites Sampled:	4	8	5	1

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	36.2	38.8	25.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	100.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.68	0.19	0.13

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
75.9	21.6	13.9

High Magnitude Causes

Nutrients
Siltation
Other Habitat Alterations

High Magnitude Sources

Nonirrigated Crop Production
Confined Animal Feeding Operation (NPS)
Channelization - Agriculture
Removal of Riparian Vegetation - Ag.
Natural

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 2

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 2

Total # Bacteria Sites in AU: 7

Other:

Impairment? Indeterminate

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 3 Scheduled Monitoring: 2007

Most of the recent data (1999-2001) are from Otter Fork, related to a large confined animal feeding operation (CAFO). Two biological reference sites have also been sampled.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05040006 020	North Fork Licking River (downstream Sycamore Creek to mouth)	129.0

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.00	0.00	0.00

High Magnitude Causes

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.0	0.0	0.0

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 2

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 1

Total # Bacteria Sites in AU: 1

Other:

Impairment? Indeterminate

Fish Consumption Assessment

Integrated Report Assessment Category: 3

Priority:

Scheduled Monitoring: 2007

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment. Only biological reference sites have been sampled in this watershed since 1993. The lower portion of the North Fork mainstem was sampled in 1993.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05040006 030	Raccoon Creek	101.7

Aquatic Life Use Assessment

Sampling Year(s): 1993, 1999, 2000

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): WWH,LRW-S

Sites Sampled:

<5	5-20	20-50	>50
5	11	3	5

Impairment? Yes

% Attainment

Small Streams (sites w/<50 mi2 drainage):

Large Streams/Rivers (sites w/>50 mi2 drainage):

Full	Partial	Non
44.8	30.7	24.5
62.5	37.5	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.54	0.34	0.12

High Magnitude Causes

Nutrients
Siltation
Organic Enrichment/DO
Flow Alteration
Other Habitat Alterations

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
54.5	34.7	12.5

High Magnitude Sources

Nonirrigated Crop Production
Confined Animal Feeding Operation (NPS)
Land Development/Suburbanization
Channelization - Agriculture
Removal of Riparian Vegetation - Ag.
Spills
Natural

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 0

Total # Bacteria Sites in AU: 3

Other:

Impairment? Indeterminate

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 4 Scheduled Monitoring: 2007

All of the sampling done from 1998-2001 was related to spills and manure spreading associated with a large confined animal feeding operation (CAFO). Sampling was done to monitor the recovery of Raccoon Creek and Lobdell Creek after major fish kills occurred in 1999.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05040006 040	South Fork Licking River (excluding Raccoon Creek)	184.9

Aquatic Life Use Assessment

Sampling Year(s): 1993, 1999

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH				
# Sites Sampled:	0	5	3	9

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	90.0	0.0	10.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	100.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.95	0.00	0.05

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
175.7	0.0	9.2

High Magnitude Causes

Priority Organics

High Magnitude Sources

Contaminated Sediments

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 4B Priority: Scheduled Monitoring: 2007

The South Fork Licking River has a 95 HUC score. It is not necessary to develop a TMDL to address the limited amount of nonattainment in the HUC. Previously, Beaver Run was included on the 303(d) list based on inadequate sampling. All currently documented and inferred nonattainment in the South Fork Licking River HUC will be addressed in anticipated remedial activities.

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
05040006 050	Licking River (South Fork/North Fork to downstream Rocky Fork); excluding Licking R. mainstem	124.1

Aquatic Life Use Assessment

Sampling Year(s): 1992, 1993, 1995, 1999	<u>Sampling Site Size Distribution (mi2)</u>				
	<5	5-20	20-50	>50	
Aquatic Life Use(s): EWH,WWH	# Sites Sampled:	0	5	2	0

Impairment? No

	<u>% Attainment</u>		
	<u>Full</u>	<u>Partial</u>	<u>Non</u>
Small Streams (sites w/<50 mi2 drainage):	100.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	100.0	0.0	0.0

<u>AU Score</u> (relative amount of attainment)		
<u>Full</u>	<u>Partial</u>	<u>Non</u>
1.00	0.00	0.00

High Magnitude Causes

<u>Weighted AU Score</u> (relative amount of attainment weighted by AU size)		
<u>Full</u>	<u>Partial</u>	<u>Non</u>
124.1	0.0	0.0

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
 >5000 colonies/100 ml. fecal coliform bacteria: 0
 >576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 0

Total # Bacteria Sites in AU: 5

Other:

Impairment? Indeterminate

Fish Consumption Assessment

Integrated Report Assessment Category: 2

Priority:

Scheduled Monitoring: 2007

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05040006 060	Licking River (downstream Rocky Fork to mouth); excluding Licking R. mainstem	127.9

Aquatic Life Use Assessment

Sampling Year(s): 1993, 1994, 1995

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH				
# Sites Sampled:	11	1	0	0

Impairment? Yes

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	36.4	50.0	13.6
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.36	0.50	0.14

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
46.6	63.9	17.4

High Magnitude Causes

Nutrients
Siltation
Organic Enrichment/DO
Other Habitat Alterations

High Magnitude Sources

Package Plants (Small Flows)
Nonirrigated Crop Production
Onsite Wastewater Systems (Septic Tanks)
Channelization - Agriculture

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 2

Scheduled Monitoring: 2007

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05060001 010	Scioto River (headwaters to downstream Taylor Creek)	159.7

Aquatic Life Use Assessment

Sampling Year(s): 1995

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH,MWH-C				
# Sites Sampled:	0	8	3	4

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	41.7	39.6	18.7
Large Streams/Rivers (sites w/>50 mi2 drainage):	34.6	65.4	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.38	0.53	0.09

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
61.0	83.8	14.9

High Magnitude Causes

Other Habitat Alterations

High Magnitude Sources

Channelization - Agriculture

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

A "One Meal a Month" Fish Consumption Advisory is in effect for the Scioto River (Channel Catfish, Carp under 20 inches, Flathead Catfish 21 inches and over, Freshwater Drum). The area under the advisory includes the entire length of the river. Additionally, a "One Meal per 2 Months" advisory (Carp 20 inches and over), and a "One Meal per Week" advisory is in effect for the same stretch of the river.

Integrated Report Assessment Category: 5

Priority: 3

Scheduled Monitoring: 2004

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05060001 020	Rush Creek	105.3

Aquatic Life Use Assessment

Sampling Year(s):

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): WWH,LRW

Sites Sampled:

<5	5-20	20-50	>50
0	0	0	0

Impairment? Unknown

% Attainment

Small Streams (sites w/<50 mi2 drainage):

Large Streams/Rivers (sites w/>50 mi2 drainage):

Full	Partial	Non
0.0	0.0	0.0
0.0	0.0	0.0

AU Score
(relative amount of attainment)

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.00	0.00	0.00

Full	Partial	Non
0.0	0.0	0.0

High Magnitude Causes

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 1

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 1

Total # Bacteria Sites in AU: 2

Other:

Impairment? Indeterminate

Fish Consumption Assessment

Integrated Report Assessment Category: 3

Priority:

Scheduled Monitoring: 2004

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment. One reference on Rush Creek was sampled in 1999. All other data are from McDonald Creek, focusing on a large combined animal feeding operation (CAFO).

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05060001 030	Scioto River (downstream Taylor Creek to upstream Little Scioto River); excluding Rush Creek	144.6

Aquatic Life Use Assessment

Sampling Year(s): 1995

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	0	3	2	9

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	66.7	33.3	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	99.4	0.6	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.83	0.17	0.00

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
120.0	24.6	0.0

High Magnitude Causes

Cause Unknown
Organic Enrichment/DO
Other Habitat Alterations

High Magnitude Sources

Pasture Land
Onsite Wastewater Systems (Septic Tanks)
Channelization - Agriculture

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 0

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 0

Total # Bacteria Sites in AU: 3

Other:

Impairment? Indeterminate

Fish Consumption Assessment

A "One Meal a Month" Fish Consumption Advisory is in effect for the Scioto River (Channel Catfish, Carp under 20 inches, Flathead Catfish 21 inches and over, Freshwater Drum). The area under the advisory includes the entire length of the river. Additionally, a "One Meal per 2 Months" advisory (Carp 20 inches and over), and a "One Meal per Week" advisory is in effect for the same stretch of the river.

Integrated Report Assessment Category: 5

Priority: 4

Scheduled Monitoring: 2004

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05060001 040	Little Scioto River	112.6

Aquatic Life Use Assessment

Sampling Year(s): 1991, 1992, 1995, 1999

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH,MWH-C,LRW				
# Sites Sampled:	3	4	2	7

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	25.0	25.0	50.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	19.2	80.8

AU Score
(relative amount of attainment)

Full	Partial	Non
0.13	0.22	0.65

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
14.1	24.9	73.6

High Magnitude Causes

Priority Organics
Metals
Nutrients
Siltation
Organic Enrichment/DO
Flow Alteration
Other Habitat Alterations
Oil and Grease

High Magnitude Sources

Combined Sewer Overflow
Nonirrigated Crop Production
Onsite Wastewater Systems (Septic Tanks)
Channelization - Agriculture
Channelization - Development
Removal of Riparian Vegetation - Ag.
Contaminated Sediments
Natural

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 1

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 1

Total # Bacteria Sites in AU: 4

Other: A "Dermal Contact Advisory" is in effect for the Little Scioto River due to PAHs contamination. The area under the advisory is from St. Rt. 739 near Marion to Holland Rd. near Marion.

Impairment? Yes

Fish Consumption Assessment

A "Do Not Eat" Fish Consumption Advisory is in effect for the Little Scioto River (all species) due to PAHs contamination. The area under the advisory is from St. Rt. 739 near Marion to Holland Rd. near Marion.

Integrated Report Assessment Category: 5 Priority: 9 Scheduled Monitoring: 2009

A USEPA funded project to remediate contaminated sediments in the Little Scioto River is underway. Future monitoring within the watershed will be conducted within the normal rotating basin schedule after the cessation of the project and when sufficient recovery time has elapsed.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05060001 050	Scioto River (downstream Little Scioto River to upstream Bokes Creek); excluding Scioto R. mainstem	140.0

Aquatic Life Use Assessment

Sampling Year(s): 1995	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH,LRW	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)		
Full	Partial	Non
0.00	0.00	0.00

High Magnitude Causes

Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non
0.0	0.0	0.0

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 1

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 1

Total # Bacteria Sites in AU: 1

Other:

Impairment? Indeterminate

Fish Consumption Assessment

Integrated Report Assessment Category: 3 **Priority:** **Scheduled Monitoring: 2011**

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05060001 060	Scioto River (upstream Bokes Creek to upstream Mill Creek); excluding Scioto R. mainstem	107.7

Aquatic Life Use Assessment

Sampling Year(s): 1999

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH,LRW	# Sites Sampled: 15	4	3	4

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	18.3	33.3	48.4
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	88.9	11.1

AU Score
(relative amount of attainment)

Full	Partial	Non
0.09	0.61	0.30

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
9.8	65.8	32.1

High Magnitude Causes

Unknown Toxicity
Unionized Ammonia
Nutrients
Siltation
Organic Enrichment/DO
Salinity/TDS/Chlorides
Other Habitat Alterations

High Magnitude Sources

Minor Industrial Point Source
Nonirrigated Crop Production
Pasture Land
Ag
Range Land
Feedlots (Confined Animals Feeding Oper.)
Animal Holding/ Management Areas
Onsite Wastewater Systems (Septic Tanks)
Septage Disposal
Channelization - Agriculture
Dredging - Agriculture
Removal of Riparian Veg. -
Bank Destabilization - Ag.
Spills

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 18

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 13

Total # Bacteria Sites in AU: 21

Other:

Impairment? Yes

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 9

Scheduled Monitoring: 2009

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
05060001 070	Mill Creek	179.3

Aquatic Life Use Assessment

Sampling Year(s): 1991, 1995, 2000, 2001

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH,MWH-C,LRW	# Sites Sampled: 9	4	5	9

Impairment? Yes

% Attainment

	<u>Full</u>	<u>Partial</u>	<u>Non</u>
Small Streams (sites w/<50 mi2 drainage):	45.5	0.0	54.5
Large Streams/Rivers (sites w/>50 mi2 drainage):	51.3	37.0	11.7

AU Score
(relative amount of attainment)

<u>Full</u>	<u>Partial</u>	<u>Non</u>
0.48	0.19	0.33

Weighted AU Score
(relative amount of attainment weighted by AU size)

<u>Full</u>	<u>Partial</u>	<u>Non</u>
86.6	33.2	59.5

High Magnitude Causes

Unknown Toxicity
Pesticides
Metals
Unionized Ammonia
Organic Enrichment/DO
Flow Alteration
Other Habitat Alterations

High Magnitude Sources

Minor Industrial Point Source Source Unknown
Major Municipal Point Source
Industrial Land Treatment
Onsite Wastewater Systems (Septic Tanks)
Hazardous Waste
Channelization - Agriculture
Spills
Natural

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 9

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 2

Total # Bacteria Sites in AU: 3

Other:

Impairment? Yes

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 10

Scheduled Monitoring: 2009

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05060001 080	Scioto River (downstream Mill Creek to upstream Olentangy River); excluding Scioto 119.7 R. mainstem	

Aquatic Life Use Assessment

Sampling Year(s): 1994, 1997, 1999

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): WWH

Sites Sampled:

<5	5-20	20-50	>50
5	5	0	0

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	10.0	0.0	90.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.10	0.00	0.90

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
12.0	0.0	107.7

High Magnitude Causes

Cause Unknown
Unknown Toxicity
Priority Organics
Unionized Ammonia
Siltation
Organic Enrichment/DO
Other Habitat Alterations

High Magnitude Sources

Municipal Point Source
Package Plant (Small Flows)
Nonirrigated Crop Production
Land Development/ Suburbanization
Channelization - Agriculture
Channelization - Development
Removal of Riparian Vegetation - Dev.
Spills
Source Unknown

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 0

Total # Bacteria Sites in AU: 1

Other:

Impairment? Indeterminate

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 1 Scheduled Monitoring: 2011

Most of the streams in this watershed are small streams, impaired by urban land use.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05060001 090	Olentangy River (headwaters to downstream Flat Run)	133.6

Aquatic Life Use Assessment

Sampling Year(s): 1994

Sampling Site Size Distribution (mi2)

		<5	5-20	20-50	>50
Aquatic Life Use(s): WWH,MWH-C,LRW	# Sites Sampled:	1	6	3	2

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	66.7	16.7	16.6
Large Streams/Rivers (sites w/>50 mi2 drainage):	61.5	38.5	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.64	0.28	0.08

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
85.6	36.9	11.1

High Magnitude Causes

Unionized Ammonia
Nutrients
Organic Enrichment/DO
Flow Alteration
Other Habitat Alterations

High Magnitude Sources

Onsite Wastewater Systems (Septic Tanks)
Channelization - Agriculture
Removal of Riparian Vegetation - Ag.

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 4

Scheduled Monitoring: 2003

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05060001 100	Whetstone Creek	114.5

Aquatic Life Use Assessment

Sampling Year(s): 1994

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): EWH,WWH

Sites Sampled:

<5	5-20	20-50	>50
0	0	6	3

Impairment? Yes

% Attainment

Small Streams (sites w/<50 mi2 drainage):

Large Streams/Rivers (sites w/>50 mi2 drainage):

Full	Partial	Non
66.7	33.3	0.0
53.8	46.2	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.60	0.40	0.00

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
69.0	45.5	0.0

High Magnitude Causes

Unionized Ammonia
Chlorine
Nutrients
Organic Enrichment/DO
Other Habitat Alterations

High Magnitude Sources

Minor Municipal Point Source
Nonirrigated Crop Production
Range Grazing - Riparian
Urban Runoff/Storm Sewers (NPS)
Onsite Wastewater Systems (Septic Tanks)
Removal of Riparian Vegetation - Ag.

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 4

Scheduled Monitoring: 2003

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05060001 110	Olentangy River (downstream Flat Run to downstream Delaware Run); excluding Whetstone Creek	183.0

Aquatic Life Use Assessment

Sampling Year(s): 1994, 1999

Aquatic Life Use(s): WWH,LRW

Impairment? Yes

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
# Sites Sampled:	6	9	0	4

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	13.9	41.7	44.4
Large Streams/Rivers (sites w/>50 mi2 drainage):	89.1	10.9	0.0

AU Score (relative amount of attainment)

Full	Partial	Non
0.52	0.26	0.22

Weighted AU Score (relative amount of attainment weighted by AU size)

Full	Partial	Non
94.2	48.1	40.7

High Magnitude Causes

Pesticides
Priority Organics
Metals
Nutrients
Siltation
Organic Enrichment/DO
Other Habitat Alterations

High Magnitude Sources

Minor Municipal Point Source
Nonirrigated Crop Production
Land Development/Suburbanization
Sewer Line Construction
Urban Runoff/Storm Sewers (NPS)
Channelization - Agriculture
Channelization - Development
Removal of Riparian Vegetation - Ag.
Streambank Destabilization - Ag.

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 0

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 0

Total # Bacteria Sites in AU: 5

Other:

Impairment? Indeterminate

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 3

Scheduled Monitoring: 2003

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05060001 120	Olentangy River (downstream Delaware Run to mouth)	113.0

Aquatic Life Use Assessment

Sampling Year(s): 1999

Sampling Site Size Distribution (mi2)

		<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH,LRW	# Sites Sampled:	11	1	10	16

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	54.6	45.4
Large Streams/Rivers (sites w/>50 mi2 drainage):	65.5	28.9	5.6

AU Score
(relative amount of attainment)

Full	Partial	Non
0.33	0.42	0.25

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
37.1	47.1	28.8

High Magnitude Causes

Cause Unknown
Unknown Toxicity
Pesticides
Priority Organics
Metals
Other Inorganics
Nutrients
Organic Enrichment/DO

Flow Alteration
Other Habitat Alterations

High Magnitude Sources

Municipal Point Sources
Nonirrigated Crop Production
Urban Runoff/Storm Sewers (NPS)
Channelization - Development
Spills
Contaminated Sediments
Natural

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 7

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 7

Total # Bacteria Sites in AU: 25

Other:

Impairment? Yes

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 8

Scheduled Monitoring: 2003

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05060001 130	Big Walnut Creek (headwaters to Hoover Dam)	189.6

Aquatic Life Use Assessment

Sampling Year(s): 2000

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH				
# Sites Sampled:	16	15	3	3

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	36.2	8.0	55.8
Large Streams/Rivers (sites w/>50 mi2 drainage):	100.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.68	0.04	0.28

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
129.1	7.6	52.9

High Magnitude Causes

Cause Unknown
Unionized Ammonia
Nutrients
Siltation
Organic Enrichment/DO
Flow Alteration
Other Habitat Alterations

Suspended Solids
Pathogens

High Magnitude Sources

Nonirrigated Crop Production
Land Development/Suburbanization
Urban Runoff/Storm Sewers (NPS)
Onsite Wastewater Systems (Septic Tanks)
Septage Disposal
Hydromodification - Agriculture
Source Unknown

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 8

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 6

Total # Bacteria Sites in AU: 43

Other:

Impairment? Yes

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 10 Scheduled Monitoring: 2010

A TMDL is in progress for the Big Walnut Creek watershed. Monitoring in support of the TMDL was conducted in 2000.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05060001 140	Big Walnut Creek (downstream Hoover Dam to upstream Alum Creek); Blacklick Creek	145.7

Aquatic Life Use Assessment

Sampling Year(s): 2000

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH,MWH-C,LRW # Sites Sampled:	13	7	7	7

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	46.7	16.3	37.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	87.1	12.9	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.67	0.15	0.18

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
97.4	21.3	27.0

High Magnitude Causes

Cause Unknown	Organic Enrichment/ DO
Unknown Toxicity	Thermal Modifications
Priority Organics	Flow Alterations
Metals	Other Habitat Alterations
Copper	Pathogens
Unionized Ammonia	Suspended Solids
Nutrients	Total Toxics
Siltation	

High Magnitude Sources

Industrial Point Sources	Removal of Riparian Veg.- Dev.
Minor Municipal Point Source	Contaminated Sediment
Land Development/Suburbanization	Natural
Urban Runoff/Storm Sewers (NPS)	Source Unknown
Onsite Wastewater Systems (Septic Tanks)	
Channelization - Development	
Upstream Impoundment	
Habitat Modifications O/than Hydromod.	

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 20

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 14

Total # Bacteria Sites in AU: 49

Other:

Impairment? Yes

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 10 Scheduled Monitoring: 2010

A TMDL is in progress for the Big Walnut Creek watershed. Monitoring in support of the TMDL was conducted in 2000.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05060001 150	Alum Creek (headwaters to Alum Creek Dam)	121.8

Aquatic Life Use Assessment

Sampling Year(s): 2000

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): WWH

Sites Sampled:

<5	5-20	20-50	>50
2	8	2	2

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	37.5	43.8	18.7
Large Streams/Rivers (sites w/>50 mi2 drainage):	100.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.69	0.22	0.09

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
83.8	26.6	11.4

High Magnitude Causes

Cause Unknown
Nutrients
Flow Alteration
Other Habitat Alterations

High Magnitude Sources

Nonirrigated Crop Production
Natural
Source Unknown

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 6

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 6

Total # Bacteria Sites in AU: 18

Other:

Impairment? Yes

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 11

Scheduled Monitoring: 2010

A TMDL is in progress for the Big Walnut Creek watershed. Monitoring in support of the TMDL was conducted in 2000.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05060001 160	Big Walnut Creek (Alum Creek to mouth); Alum Creek (downstream Alum Creek Dam to mouth)	99.7

Aquatic Life Use Assessment

Sampling Year(s): 2000

Sampling Site Size Distribution (mi2)

		<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH,LRW	# Sites Sampled:	2	1	0	9

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	100.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	43.5	56.5	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.44	0.56	0.00

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
43.4	56.3	0.0

High Magnitude Causes

Cause Unknown
Siltation
Organic Enrichment/DO
Flow Alteration
Other Habitat Alterations

High Magnitude Sources

Combined Sewer Overflows
Land Development/Suburbanization
Urban Runoff/Storm Sewers (NPS)
Channelization - Development
Habitat Modifications o/than Hydromod.

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 29

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 17

Total # Bacteria Sites in AU: 26

Other:

Impairment? Yes

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 11 Scheduled Monitoring: 2010

A TMDL is in progress for the Big Walnut Creek watershed. Monitoring in support of the TMDL was conducted in 2000.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05060001 170	Walnut Creek (headwaters to downstream Sycamore Creek)	138.0

Aquatic Life Use Assessment

Sampling Year(s): 1996

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH				
# Sites Sampled:	2	16	2	7

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	84.4	15.6	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	92.0	0.0	8.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.88	0.08	0.04

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
121.7	10.8	5.5

High Magnitude Causes

Cause Unknown
Mercury
Organic Enrichment/DO
Flow Alteration

High Magnitude Sources

Major Industrial Point Source
Land Development/Suburbanization
Urban Runoff/Storm Sewers (NPS)
Spills
Source Unknown

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 4

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 3

Total # Bacteria Sites in AU: 27

Other:

Impairment? Indeterminate

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for Walnut Creek (Channel Catfish). The area under the advisory includes the entire length of the stream.

Integrated Report Assessment Category: 5

Priority: 4

Scheduled Monitoring: 2005

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05060001 180	Walnut Creek (downstream Sycamore Creek to mouth)	147.5

Aquatic Life Use Assessment

Sampling Year(s): 1996

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH,MWH-C				
# Sites Sampled:	9	7	1	16

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	29.0	9.9	61.1
Large Streams/Rivers (sites w/>50 mi2 drainage):	96.6	0.0	3.4

AU Score
(relative amount of attainment)

Full	Partial	Non
0.63	0.05	0.32

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
92.6	7.4	47.5

High Magnitude Causes

Cause Unknown
Unknown Toxicity
Siltation
Flow Alteration
Other Habitat Alterations

High Magnitude Sources

Nonirrigated Crop Production
Land Development/Suburbanization
Urban Runoff/Storm Sewers (NPS)
Channelization - Development
Source Unknown

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 9

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 7

Total # Bacteria Sites in AU: 25

Other:

Impairment? Yes

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for Walnut Creek (Channel Catfish). The area under the advisory includes the entire length of the stream.

Integrated Report Assessment Category: 5

Priority: 11

Scheduled Monitoring: 2005

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05060001 190	Big Darby Creek (headwaters to downstream Sugar Creek)	176.1

Aquatic Life Use Assessment

Sampling Year(s): 2001

Sampling Site Size Distribution (mi2)

		<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH,MWH-C	# Sites Sampled:	10	14	2	21

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	61.0	35.0	4.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	52.5	27.9	19.6

AU Score
(relative amount of attainment)

Full	Partial	Non
0.57	0.32	0.11

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
99.8	55.5	20.8

High Magnitude Causes

Siltation
Organic Enrichment/DO
Other Habitat Alterations

High Magnitude Sources

Minor Municipal Point Source
Pasture Land
Highway/Road/Bridge/Sewer Line
Channelization - Agriculture

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria:

Sites in AU w/ Bacteria Violations: 0

Total # Bacteria Sites in AU: 3

Other:

Impairment? Indeterminate

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 4 Scheduled Monitoring: 2011

A TMDL is in progress for the Big Darby Creek basin. Monitoring in support of the TMDL was conducted in 2001 and 2002.

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
05060001 200	Big Darby Creek (downstream Sugar Creek to upstream Little Darby Creek)	77.0

Aquatic Life Use Assessment

Sampling Year(s): 2001

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH				
# Sites Sampled:	1	7	0	4

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	28.5	21.5	50.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	75.6	24.4	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.52	0.23	0.25

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
40.1	17.6	19.3

High Magnitude Causes

Un-ionized Ammonia
Organic Enrichment/DO

High Magnitude Sources

Package Plants (Small Flows)
Combined Sewer Overflows
Spills

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 3 Scheduled Monitoring: 2011

A TMDL is in progress for the Big Darby Creek basin. Monitoring in support of the TMDL was conducted in 2001 and 2002.

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
05060001 210	Little Darby Creek	178.5

Aquatic Life Use Assessment

Sampling Year(s): 2001

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): EWH

	<5	5-20	20-50	>50
# Sites Sampled:	8	11	2	7

Impairment? Yes

% Attainment

	<u>Full</u>	<u>Partial</u>	<u>Non</u>
Small Streams (sites w/<50 mi2 drainage):	42.6	27.0	30.4
Large Streams/Rivers (sites w/>50 mi2 drainage):	84.4	15.6	0.0

AU Score
(relative amount of attainment)

<u>Full</u>	<u>Partial</u>	<u>Non</u>
0.64	0.21	0.15

Weighted AU Score
(relative amount of attainment weighted by AU size)

<u>Full</u>	<u>Partial</u>	<u>Non</u>
113.4	38.0	27.1

High Magnitude Causes

Organic Enrichment/DO

High Magnitude Sources

Pasture Land

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 3 Scheduled Monitoring: 2011

A TMDL is in progress for the Big Darby Creek basin. Monitoring in support of the TMDL was conducted in 2001 and 2002.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05060001 220	Big Darby Creek (downstream Little Darby Creek to mouth)	124.0

Aquatic Life Use Assessment

Sampling Year(s): 2001

		Sampling Site Size Distribution (mi2)			
		<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH,MWH-C	# Sites Sampled:	7	15	0	8

Impairment? Yes

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	44.8	20.5	34.7
Large Streams/Rivers (sites w/>50 mi2 drainage):	100.0	0.0	0.0

AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.73	0.10	0.17	89.8	12.6	21.6

High Magnitude Causes

Nutrients
Siltation
Organic Enrichment/DO
Flow Alteration
Other Habitat Alterations
Pathogens

High Magnitude Sources

Package Plants (Small Flows)
Nonirrigated Crop Production
Land Development/Suburbanization
Urban Runoff/Storm Sewers (NPS)
Onsite Wastewater Systems (Septic Tanks)
Channelization - Agriculture
Natural

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 0

Total # Bacteria Sites in AU: 1

Other:

Impairment? No

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 3 Scheduled Monitoring: 2011

A TMDL is in progress for the Big Darby Creek basin. Monitoring in support of the TMDL was conducted in 2001 and 2002.

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
05060001 230	Scioto River (downstream Olentangy River to upstream Big Darby Creek); excluding Scioto R. mainstem	187.2

Aquatic Life Use Assessment

Sampling Year(s):

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): WWH,LRW

Sites Sampled:

<5	5-20	20-50	>50
0	0	0	0

Impairment? Unknown

% Attainment

<u>Full</u>	<u>Partial</u>	<u>Non</u>
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Small Streams (sites w/<50 mi2 drainage):

0.0 0.0 0.0

Large Streams/Rivers (sites w/>50 mi2 drainage):

0.0 0.0 0.0

AU Score
(relative amount of attainment)

<u>Full</u>	<u>Partial</u>	<u>Non</u>
0.00	0.00	0.00

High Magnitude Causes

Weighted AU Score
(relative amount of attainment weighted by AU size)

<u>Full</u>	<u>Partial</u>	<u>Non</u>
0.0	0.0	0.0

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3

Priority:

Scheduled Monitoring: 2011

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05060002 010	Scioto River (downstream Big Darby Cr. to upstream Kinnikinnick Cr.); excluding Scioto R. mainstem	162.4

Aquatic Life Use Assessment

Sampling Year(s): 1992, 1993, 1996, 1997

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH,LRW	4	7	5	0
# Sites Sampled:	4	7	5	0

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	63.1	30.7	6.2
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.63	0.31	0.06

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
102.3	50.3	9.8

High Magnitude Causes

Unknown Toxicity
Priority Organics
Metals
Unionized Ammonia
Siltation
Organic Enrichment/DO
Other Habitat Alterations

High Magnitude Sources

Major Industrial Point Source
Municipal Point Sources
Package Plants (Small Flows)
Nonirrigated Crop Production
Onsite Wastewater Systems (Septic Tanks)
Channelization- Ag
Channelization- Development
Streambank Destabilization- Ag

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for Scippo Creek (all species). The area under the advisory is from Kingston Pike to the Scioto River.

Integrated Report Assessment Category: 5

Priority: 3

Scheduled Monitoring: 2011

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05060002 020	Deer Creek (headwaters to upstream Sugar Run)	146.7

Aquatic Life Use Assessment

Sampling Year(s): 1997

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): WWH

	<5	5-20	20-50	>50
# Sites Sampled:	2	6	5	4

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	83.3	0.0	16.7
Large Streams/Rivers (sites w/>50 mi2 drainage):	100.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.92	0.00	0.08

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
134.5	0.0	12.2

High Magnitude Causes

Cause Unknown
Unionized Ammonia
Nutrients
Pathogens

High Magnitude Sources

Major Municipal Point Source
Package Plants (Small Flows)
Aquaculture
Urban Runoff/Storm Sewers (NPS)
Channelization - Agriculture

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 2

Scheduled Monitoring: 2011

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05060002 030	Deer Creek (upstream Sugar Run to upstream Dry Run)	163.1

Aquatic Life Use Assessment

Sampling Year(s): 1997

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH				
# Sites Sampled:	1	1	1	5

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	100.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	53.4	46.6	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.77	0.23	0.00

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
125.1	38.0	0.0

High Magnitude Causes

Cause Unknown
Nutrients
Flow Alteration

High Magnitude Sources

Nonirrigated Crop Production
Upstream Impoundment
Flow Reg./Mod. - Development
Source Unknown

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 4

Scheduled Monitoring: 2011

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05060002 040	Deer Creek (upstream Dry Run to mouth)	102.1

Aquatic Life Use Assessment

Sampling Year(s): 1997

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): EWH,WWH

	<5	5-20	20-50	>50
# Sites Sampled:	0	1	1	6

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	50.0	50.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	100.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.75	0.25	0.00

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
76.6	25.5	0.0

High Magnitude Causes

Organic Enrichment/DO

High Magnitude Sources

Municipal Point Source

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 4

Scheduled Monitoring: 2011

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05060002 050	Scioto River (upstream Kinnikinnick Creek to upstream Paint Creek); excluding Scioto 97.0 R. mainstem	

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0
<u>High Magnitude Causes</u>			<u>High Magnitude Sources</u>		

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
 >5000 colonies/100 ml. fecal coliform bacteria:
 >576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 Priority: Scheduled Monitoring: 2011

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05060002 060	Scioto River (downstream Paint Creek to upstream Salt Creek); excluding Scioto R. mainstem	129.1

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.00	0.00	0.00

High Magnitude Causes

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.0	0.0	0.0

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria:

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3

Priority:

Scheduled Monitoring: 2011

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05060002 070	Salt Creek (headwaters to upstream Queer Creek)	174.6

Aquatic Life Use Assessment

Sampling Year(s): 1992

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH				
# Sites Sampled:	0	5	3	2

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	90.0	10.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	48.2	51.8	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.69	0.31	0.00

High Magnitude Causes

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
120.6	54.0	0.0

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria:

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for Salt Creek (Smallmouth Bass). The area under the advisory is from Laurelville to the confluence of Queer Creek.

Integrated Report Assessment Category: 5

Priority: 5

Scheduled Monitoring: 2011

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05060002 080	Middle Fork Salt Creek	109.0

Aquatic Life Use Assessment

Sampling Year(s):

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): WWH

Sites Sampled:

<5	5-20	20-50	>50
0	0	0	0

Impairment? Unknown

% Attainment

Small Streams (sites w/<50 mi2 drainage):

Large Streams/Rivers (sites w/>50 mi2 drainage):

Full	Partial	Non
0.0	0.0	0.0
0.0	0.0	0.0

AU Score
(relative amount of attainment)

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.00	0.00	0.00

Full	Partial	Non
0.0	0.0	0.0

High Magnitude Causes

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3

Priority:

Scheduled Monitoring: 2011

Only biological reference sites have been sampled since the late 1980's.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05060002 090	Little Salt Creek (excluding Middle Fork)	138.5

Aquatic Life Use Assessment

Sampling Year(s):

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): EWH,WWH

	<5	5-20	20-50	>50
# Sites Sampled:	0	0	0	0

Impairment? Unknown

% Attainment

Small Streams (sites w/<50 mi2 drainage):

Full	Partial	Non
------	---------	-----

Large Streams/Rivers (sites w/>50 mi2 drainage):

0.0	0.0	0.0
-----	-----	-----

0.0	0.0	0.0
-----	-----	-----

AU Score
(relative amount of attainment)

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
------	---------	-----

Full	Partial	Non
------	---------	-----

0.00	0.00	0.00
------	------	------

0.0	0.0	0.0
-----	-----	-----

High Magnitude Causes

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3

Priority:

Scheduled Monitoring: 2011

Biological sampling has not been done since 1986. Fish tissue sampling was done in 1997. Buckeye Creek is currently listed on the 303(d) list, but data from 1986 are not adequate to justify keeping it on the list. Another survey of this stream is needed to reassess the status.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05060002 100	Salt Creek (upstream Queer Creek to mouth); excluding Little Salt Creek and Middle Fork Salt Creek	133.1

Aquatic Life Use Assessment

Sampling Year(s): 1992

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH	0	3	2	7
# Sites Sampled:	0	3	2	7

Impairment? Yes

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	100.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	83.0	17.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.92	0.08	0.00

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
121.8	11.3	0.0

High Magnitude Causes

Unknown Cause
Siltation

High Magnitude Sources

Unknown Source
Silviculture
Streambank Destabilization - Ag.

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
>5000 colonies/100 ml. fecal coliform bacteria:
>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 0

Total # Bacteria Sites in AU: 1

Other:

Impairment? Indeterminate

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for Salt Creek (Smallmouth Bass). The area under the advisory is from Laurelville to the confluence of Queer Creek.

Integrated Report Assessment Category: 5

Priority: 4

Scheduled Monitoring: 2011

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
05060002 110	Scioto River (downstream Salt Creek to downstream Pee Pee Creek); excluding Scioto R. mainstem	137.0

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0

High Magnitude Causes

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
 >5000 colonies/100 ml. fecal coliform bacteria:
 >576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3

Priority:

Scheduled Monitoring: 2011

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05060002 120	Scioto River (downstream Pee Pee Creek to upstream Sunfish Creek); excluding Scioto R. mainstem	104.8

Aquatic Life Use Assessment

Sampling Year(s): 1991, 1992, 1997

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH				
# Sites Sampled:	6	1	0	2

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	66.7	16.7	16.6
Large Streams/Rivers (sites w/>50 mi2 drainage):	36.1	63.9	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.52	0.40	0.08

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
53.9	42.2	8.7

High Magnitude Causes

Cause Unknown
Metals
Siltation
Flow Alteration
Low Nutrients

High Magnitude Sources

Major Industrial Point Source
Highway/ Road/ Bridge/ Sewer Line
Natural
Source Unknown

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 4

Scheduled Monitoring: 2011

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05060002 130	Sunfish Creek	144.4

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0
<u>High Magnitude Causes</u>			<u>High Magnitude Sources</u>		

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
>5000 colonies/100 ml. fecal coliform bacteria:
>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 Priority: Scheduled Monitoring: 2011

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment. One biological reference site was sampled on Sunfish Creek, as well as one additional site near the mouth.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05060002 140	South Fork Scioto Brush Creek	113.0

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.00	0.00	0.00

High Magnitude Causes

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.0	0.0	0.0

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 **Priority:** **Scheduled Monitoring: 2011**

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment. Scioto Brush Creek, Turkey Run and Mill Creek are currently on the 303(d) list. The limited amount of data collected between 1979 and 2000 are not adequate to justify keeping the entire HUC on the 303(d) list.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05060002 150	Scioto Brush Creek (excluding South Fork)	160.2

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH	# Sites Sampled:	0	0	0
Impairment? Unknown				
		% Attainment		
		Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):		0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):		0.0	0.0	0.0
AU Score		Weighted AU Score		
(relative amount of attainment)		(relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial
0.00	0.00	0.00	0.0	0.0
High Magnitude Causes		High Magnitude Sources		

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
 >5000 colonies/100 ml. fecal coliform bacteria:
 >576 colonies/100 ml. E. coli bacteria:
 # Sites in AU w/ Bacteria Violations:
 Total # Bacteria Sites in AU: 0
 Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 Priority: Scheduled Monitoring: 2011

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment. Scioto Brush Creek is currently on the 303(d) list. The limited amount of data collected between 1987 and 2000 are not adequate to justify keeping the entire HUC on the 303(d) list.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05060002 160	Scioto River (downstream Sunfish Creek to mouth); excluding Scioto Brush Cr. and Scioto R. mainstem	159.3

Aquatic Life Use Assessment

Sampling Year(s): 1992, 1993, 1997

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH,LRW				
# Sites Sampled:	5	5	1	0

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	80.0	5.0	15.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)		
Full	Partial	Non
0.80	0.05	0.15

Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non
127.4	8.0	23.9

High Magnitude Causes

Nutrients
Organic Enrichment/DO
Other Habitat Alterations

High Magnitude Sources

Range Grazing - Riparian
Feedlots (Confined Animal Feeding Oper.)
Upstream Impoundment
Flow Reg./Mod. - Development

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 2

Scheduled Monitoring: 2011

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05060003 010	Paint Creek (headwaters to downstream East Fork)	119.3

Aquatic Life Use Assessment

Sampling Year(s): 1997

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): WWH

	<5	5-20	20-50	>50
# Sites Sampled:	0	1	5	5

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	70.0	0.0	30.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	51.6	48.4	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.61	0.24	0.15

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
72.5	28.9	17.9

High Magnitude Causes

Nutrients
Siltation
Other Habitat Alterations

High Magnitude Sources

Combined Sewer Overflows
Nonirrigated Crop Production
Urban Runoff/Storm Sewers (NPS)
Channelization - Agriculture

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria:

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for Paint Creek (Largemouth Bass). The area under the advisory includes the entire length of the stream.

Integrated Report Assessment Category: 5 Priority: 5 Scheduled Monitoring: 2006

A Watershed Management Plan prepared by a CWA Section 319 funded Watershed Coordinator under the direction of the Paint Creek watershed SWCDs (Ross, Fayette, Highland, Greene, Madison, and Clinton) is currently under development. Monitoring in support of the project was conducted in the upper Paint Creek watershed by the Ohio EPA in 1997.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05060003 020	Sugar Creek	81.5

Aquatic Life Use Assessment

Sampling Year(s): 1997, 1999

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	0	0	4	3

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	25.0	75.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	100.0	0.0

AU Score
(relative amount of attainment)

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.00	0.62	0.38

Full	Partial	Non
0.0	50.9	30.6

High Magnitude Causes

Cause Unknown
Nutrients
Other Habitat Alterations

High Magnitude Sources

Minor Municipal Point Source
Channelization - Agriculture
Source Unknown

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5 **Priority: 1** **Scheduled Monitoring: 2006**

A Watershed Management Plan prepared by a CWA Section 319 funded Watershed Coordinator under the direction of the Paint Creek watershed SWCDs (Ross, Fayette, Highland, Greene, Madison, and Clinton) is currently under development. Monitoring in support of the project was conducted in the upper Paint Creek watershed by the Ohio EPA in 1997.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05060003 030	Rattlesnake Creek (headwaters to upstream Lees Creek)	130.6

Aquatic Life Use Assessment

Sampling Year(s): 1997

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): EWH,WWH

	<5	5-20	20-50	>50
# Sites Sampled:	0	2	5	5

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	25.0	35.0	40.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	49.6	50.4

AU Score
(relative amount of attainment)

Full	Partial	Non
0.13	0.42	0.45

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
16.3	55.3	59.0

High Magnitude Causes

Nutrients
Organic Enrichment/DO
Other Habitat Alterations

High Magnitude Sources

Minor Municipal Point Source
Channelization - Agriculture

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria:

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5 **Priority: 1** **Scheduled Monitoring: 2006**

A Watershed Management Plan prepared by a CWA Section 319 funded Watershed Coordinator under the direction of the Paint Creek watershed SWCDs (Ross, Fayette, Highland, Greene, Madison, and Clinton) is currently under development. Monitoring in support of the project was conducted in the upper Paint Creek watershed by the Ohio EPA in 1997.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05060003 040	Rattlesnake Creek (upstream Lees Creek to mouth)	148.3

Aquatic Life Use Assessment

Sampling Year(s): 1996, 1997

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): EWH,WWH

	<5	5-20	20-50	>50
# Sites Sampled:	1	1	2	2

Impairment? No

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	100.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	100.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
1.00	0.00	0.00

High Magnitude Causes

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
148.3	0.0	0.0

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 2

Priority:

Scheduled Monitoring: 2006

A Watershed Management Plan prepared by a CWA Section 319 funded Watershed Coordinator under the direction of the Paint Creek watershed SWCDs (Ross, Fayette, Highland, Greene, Madison, and Clinton) is currently under development. Monitoring in support of the project was conducted in the upper Paint Creek watershed by the Ohio EPA in 1997.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05060003 050	Paint Creek (downstream East Fork to upstream Rocky Fork); excluding Sugar Cr. and Rattlesnake Cr.	95.0

Aquatic Life Use Assessment

Sampling Year(s): 1997

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH				
# Sites Sampled:	0	0	0	5

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	100.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.00	1.00	0.00

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.0	95.0	0.0

High Magnitude Causes

Organic Enrichment/DO

High Magnitude Sources

Major Municipal Point Source

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 0

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 0

Total # Bacteria Sites in AU: 1

Other:

Impairment? Indeterminate

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for Paint Creek (Largemouth Bass). The area under the advisory includes the entire length of the stream.

Integrated Report Assessment Category: 5 Priority: 3 Scheduled Monitoring: 2006

A Watershed Management Plan prepared by a CWA Section 319 funded Watershed Coordinator under the direction of the Paint Creek watershed SWCDs (Ross, Fayette, Highland, Greene, Madison, and Clinton) is currently under development. Monitoring in support of the project was conducted in the upper Paint Creek watershed by the Ohio EPA in 1997.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05060003 060	Rocky Fork Paint Creek	144.0

Aquatic Life Use Assessment

Sampling Year(s): 1997

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): EWH,WWH

	<5	5-20	20-50	>50
# Sites Sampled:	1	0	6	4

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	66.7	33.3	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	58.7	0.0	41.3

AU Score (relative amount of attainment)

Full	Partial	Non
0.63	0.16	0.21

Weighted AU Score (relative amount of attainment weighted by AU size)

Full	Partial	Non
90.3	23.9	29.8

High Magnitude Causes

Cause Unknown
Organic Enrichment/DO
Other Habitat Alterations

High Magnitude Sources

Upstream Impoundment
Streambank Destabilization- Ag
Natural
Source Unknown

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 3 Scheduled Monitoring: 2006

A Watershed Management Plan prepared by a CWA Section 319 funded Watershed Coordinator under the direction of the Paint Creek watershed SWCDs (Ross, Fayette, Highland, Greene, Madison, and Clinton) is currently under development. Monitoring in support of the project was conducted in the upper Paint Creek watershed by the Ohio EPA in 1997.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05060003 070	Paint Creek (downstream Rocky Fork to downstream Lower Twin Creek); excluding Paint Creek mainstem	122.0

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.00	0.00	0.00

High Magnitude Causes

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.0	0.0	0.0

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 0

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 0

Total # Bacteria Sites in AU: 2

Other:

Impairment? Indeterminate

Fish Consumption Assessment

Integrated Report Assessment Category: 3 Priority: Scheduled Monitoring: 2006

A Watershed Management Plan prepared by a CWA Section 319 funded Watershed Coordinator under the direction of the Paint Creek watershed SWCDs (Ross, Fayette, Highland, Greene, Madison, and Clinton) is currently under development. Monitoring in support of the project was conducted in the upper Paint Creek watershed by the Ohio EPA in 1997.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05060003 080	North Fork Paint Creek (headwaters to downstream Compton Creek)	120.5

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.00	0.00	0.00

High Magnitude Causes

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.0	0.0	0.0

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria:

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 **Priority:** **Scheduled Monitoring: 2006**

A Watershed Management Plan prepared by a CWA Section 319 funded Watershed Coordinator under the direction of the Paint Creek watershed SWCDs (Ross, Fayette, Highland, Greene, Madison, and Clinton) is currently under development. Monitoring in support of the project was conducted in the upper Paint Creek watershed by the Ohio EPA in 1997.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05060003 090	North Fork Paint Creek (downstream Compton Creek to mouth)	114.0

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0
<u>High Magnitude Causes</u>			<u>High Magnitude Sources</u>		

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
 >5000 colonies/100 ml. fecal coliform bacteria:
 >576 colonies/100 ml. E. coli bacteria:

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 **Priority:** **Scheduled Monitoring: 2006**

A Watershed Management Plan prepared by a CWA Section 319 funded Watershed Coordinator under the direction of the Paint Creek watershed SWCDs (Ross, Fayette, Highland, Greene, Madison, and Clinton) is currently under development. Monitoring in support of the project was conducted in the upper Paint Creek watershed by the Ohio EPA in 1997.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05060003 100	Paint Creek (downstream Lower Twin Creek to mouth); excluding North Fork and Paint Creek mainstem	67.3

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0
<u>High Magnitude Causes</u>			<u>High Magnitude Sources</u>		

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
 >5000 colonies/100 ml. fecal coliform bacteria:
 >576 colonies/100 ml. E. coli bacteria:

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 **Priority:** **Scheduled Monitoring: 2006**

A Watershed Management Plan prepared by a CWA Section 319 funded Watershed Coordinator under the direction of the Paint Creek watershed SWCDs (Ross, Fayette, Highland, Greene, Madison, and Clinton) is currently under development. Monitoring in support of the project was conducted in the upper Paint Creek watershed by the Ohio EPA in 1997.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05080001 010	Great Miami River (headwaters to upstream Cherokee Mans Run)	100.0

Aquatic Life Use Assessment

Sampling Year(s): 1994, 1999

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH				
# Sites Sampled:	3	9	1	1

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	77.8	5.6	16.6
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	100.0	0.0

AU Score (relative amount of attainment)

Full	Partial	Non
0.39	0.53	0.08

Weighted AU Score (relative amount of attainment weighted by AU size)

Full	Partial	Non
38.9	52.8	8.3

High Magnitude Causes

Other Habitat Alterations

High Magnitude Sources

Removal of Riparian Vegetation - Ag.

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria:

Sites in AU w/ Bacteria Violations: 0

Total # Bacteria Sites in AU: 1

Other:

Impairment? No

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 2

Scheduled Monitoring: 2008

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
05080001 020	Muchinippi Creek	88.5

Aquatic Life Use Assessment

Sampling Year(s): 1994,1999

Sampling Site Size Distribution (mi2)

		<u><5</u>	<u>5-20</u>	<u>20-50</u>	<u>>50</u>
Aquatic Life Use(s): WWH,MWH-C	# Sites Sampled:	1	2	1	2

Impairment? Yes

% Attainment

	<u>Full</u>	<u>Partial</u>	<u>Non</u>
Small Streams (sites w/<50 mi2 drainage):	100.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	100.0	0.0

AU Score
(relative amount of attainment)

<u>Full</u>	<u>Partial</u>	<u>Non</u>
0.50	0.50	0.00

Weighted AU Score
(relative amount of attainment weighted by AU size)

<u>Full</u>	<u>Partial</u>	<u>Non</u>
44.3	44.2	0.0

High Magnitude Causes

Siltation
Other Habitat Alterations

High Magnitude Sources

Nonirrigated Crop Production
Channelization - Agriculture

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 1

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 1

Total # Bacteria Sites in AU: 1

Other:

Impairment? Indeterminate

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 4

Scheduled Monitoring: 2008

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05080001 030	Great Miami River (upst. Cherokee Mans Run to downstream Bokengehalas Cr.); excluding Muchinippi Cr.	149.7

Aquatic Life Use Assessment

Sampling Year(s): 1994

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled: 3	5	3	4

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	43.3	31.7	25.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	66.3	33.7	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.55	0.33	0.12

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
82.0	49.0	18.7

High Magnitude Causes

Siltation
Organic Enrichment/DO
Other Habitat Alterations

High Magnitude Sources

Minor Municipal Point Source
Nonirrigated Crop Production
Urban Runoff/ Storm Sewer (NPS)
Channelization - Agriculture
Habitat Modification other than Hydromod.

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for the Great Miami River (Largemouth Bass, Rock bass, Smallmouth Bass, White Bass). The area under the advisory includes the entire length of the river. Additionally, a "One Meal per Week" advisory (Saugrey) is in effect.

Integrated Report Assessment Category: 5

Priority: 5

Scheduled Monitoring: 2008

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05080001 040	Great Miami River (downstream Bokengehalas Creek to downstream Plum Creek)	145.6

Aquatic Life Use Assessment

Sampling Year(s): 1994

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): EWH,WWH

Sites Sampled:

<5	5-20	20-50	>50
0	2	0	5

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	100.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	96.0	4.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.98	0.02	0.00

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
142.7	2.9	0.0

High Magnitude Causes

Flow Alteration

High Magnitude Sources

Upstream Impoundment
Flow Reg./Mod. - Development

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for the Great Miami River (Largemouth Bass, Rock bass, Smallmouth Bass, White Bass). The area under the advisory includes the entire length of the river. Additionally, a "One Meal per Week" advisory (Saugeye) is in effect.

Integrated Report Assessment Category: 5

Priority: 4

Scheduled Monitoring: 2008

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05080001 050	Loramie Creek (headwaters to downstream Mile Creek)	147.4

Aquatic Life Use Assessment

Sampling Year(s): 1994, 1999

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH,MWH-C				
# Sites Sampled:	2	2	1	2

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	100.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	33.3	66.7

AU Score (relative amount of attainment)

Full	Partial	Non
0.00	0.17	0.83

Weighted AU Score (relative amount of attainment weighted by AU size)

Full	Partial	Non
0.0	24.6	122.8

High Magnitude Causes

Siltation
Flow Alteration
Other Habitat Alterations

High Magnitude Sources

Nonirrigated Crop Production
Channelization - Agriculture
Flow Reg./Mod. - Agriculture
Removal of Riparian Vegetation - Ag.
Streambank Destabilization - Ag.

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 0

Total # Bacteria Sites in AU: 3

Other:

Impairment? No

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 1

Scheduled Monitoring: 2008

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05080001 060	Loramie Creek (downstream Mile Creek to mouth)	117.6

Aquatic Life Use Assessment

Sampling Year(s): 1994, 1999

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH,MWH-C				
# Sites Sampled:	1	1	0	4

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	100.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	21.0	17.4	61.6

AU Score
(relative amount of attainment)

Full	Partial	Non
0.11	0.09	0.80

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
12.4	10.2	95.0

High Magnitude Causes

Siltation
Flow Alteration
Other Habitat Alterations

High Magnitude Sources

Nonirrigated Crop Production
Channelization - Agriculture
Streambank Destabilization - Ag.

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 0

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 0

Total # Bacteria Sites in AU: 3

Other:

Impairment? Indeterminate

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 1

Scheduled Monitoring: 2008

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
05080001 070	Great Miami River (downstream Plum Creek to upstream Spring Creek); excluding GMR mainstem	146.8

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0

High Magnitude Causes

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
>5000 colonies/100 ml. fecal coliform bacteria:
>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 **Priority:** **Scheduled Monitoring: 2008**
A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment.

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
05080001 080	Great Miami River (upstream Spring Creek to upstream Honey Creek); excluding GMR mainstem	139.5

Aquatic Life Use Assessment

Sampling Year(s): 1994

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,LRW				
# Sites Sampled:	0	0	6	0

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	100.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.00	1.00	0.00

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.0	139.5	0.0

High Magnitude Causes

Other Habitat Alterations

High Magnitude Sources

Nonirrigated Crop Production
Irrigated Crop Production
Habitat Modifications o/than Hydromod.

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 2

Scheduled Monitoring: 2008

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05080001 090	Stillwater River (headwaters to upstream Swamp Creek)	115.0

Aquatic Life Use Assessment

Sampling Year(s): 1999

Sampling Site Size Distribution (mi2)

		<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH,MWH-C	# Sites Sampled:	14	11	3	6

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	56.1	9.1	34.8
Large Streams/Rivers (sites w/>50 mi2 drainage):	69.3	18.4	12.3

AU Score
(relative amount of attainment)

Full	Partial	Non
0.63	0.14	0.23

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
72.1	15.8	27.1

High Magnitude Causes

Nutrients
Organic Enrichment/DO
Other Habitat Alterations

High Magnitude Sources

Nonirrigated Crop Production
Confined Animal Feeding Oper. (NPS)
Onsite Wastewater Systems (Septic Tanks)
Channelization - Agriculture

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 1

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 1

Total # Bacteria Sites in AU: 20

Other:

Impairment? Indeterminate

Fish Consumption Assessment

A "One Meal a Month" Fish Consumption Advisory is in effect for the Stillwater River (channel catfish, smallmouth bass) due to Mercury contamination. The area under the advisory includes the entire length of the river.

Integrated Report Assessment Category: 5 Priority: 4 Scheduled Monitoring: 2009

A TMDL is in progress for the Stillwater River basin. Monitoring in support of the TMDL was conducted in 1999.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05080001 100	Stillwater River (upstream Swamp Creek to upstream Greenville Creek)	121.4

Aquatic Life Use Assessment

Sampling Year(s): 1999

		Sampling Site Size Distribution (mi2)			
		<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH,MWH-C	# Sites Sampled:	8	13	3	7

Impairment? Yes

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	19.3	52.5	28.2
Large Streams/Rivers (sites w/>50 mi2 drainage):	63.4	27.5	9.1

AU Score (relative amount of attainment)		
Full	Partial	Non
0.41	0.40	0.19

Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non
50.1	48.6	22.7

High Magnitude Causes

Other Inorganics
Nutrients
Siltation
Organic Enrichment/DO
Other Habitat Alterations

High Magnitude Sources

Combined Sewer Overflows
Nonirrigated Crop Productions
Confined Animals Feeding Oper. (NPS)
Septage Disposal
Channelization - Agriculture
Spills

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 8

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 7

Total # Bacteria Sites in AU: 25

Other:

Impairment? Yes

Fish Consumption Assessment

A "One Meal a Month" Fish Consumption Advisory is in effect for the Stillwater River (channel catfish, smallmouth bass) due to Mercury contamination. The area under the advisory includes the entire length of the river.

Integrated Report Assessment Category: 5 Priority: 12 Scheduled Monitoring: 2009

A TMDL is in progress for the Stillwater River basin. Monitoring in support of the TMDL was conducted in 1999.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05080001 110	Greenville Creek (headwaters to downstream West Branch)	70.1

Aquatic Life Use Assessment

Sampling Year(s): 1999

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH	1	8	2	3

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	87.5	6.3	6.2
Large Streams/Rivers (sites w/>50 mi2 drainage):	100.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.94	0.03	0.03

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
65.7	2.2	2.2

High Magnitude Causes

Organic Enrichment/DO
Other Habitat Alterations

High Magnitude Sources

Channelization - Agriculture

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 0

Total # Bacteria Sites in AU: 9

Other:

Impairment? Indeterminate

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for Greenville Creek (Smallmouth Bass). The area under the advisory includes the entire length of the stream.

Integrated Report Assessment Category: 5 Priority: 3 Scheduled Monitoring: 2009

A TMDL is in progress for the Stillwater River basin. Monitoring in support of the TMDL was conducted in 1999.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05080001 120	Greenville Creek (downstream West Branch to mouth)	97.6

Aquatic Life Use Assessment

Sampling Year(s): 1999

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH				
# Sites Sampled:	8	8	2	11

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	100.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	49.8	35.8	14.4

AU Score
(relative amount of attainment)

Full	Partial	Non
0.75	0.18	0.07

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
73.1	17.5	7.0

High Magnitude Causes

Organic Enrichment/DO

High Magnitude Sources

Major Municipal Point Source
Onsite Wastewater System (Septic Tanks)
Channelization - Development

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 4

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 4

Total # Bacteria Sites in AU: 27

Other:

Impairment? Indeterminate

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for Greenville Creek (Smallmouth Bass). The area under the advisory includes the entire length of the stream.

Integrated Report Assessment Category: 5 Priority: 5 Scheduled Monitoring: 2009

A TMDL is in progress for the Stillwater River basin. Monitoring in support of the TMDL was conducted in 1999.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05080001 130	Stillwater River (downstream Greenville Cr. to upstream Ludlow Cr.); excluding Stillwater R mainstem	92.8

Aquatic Life Use Assessment

Sampling Year(s): 1999

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH,MWH-C	# Sites Sampled: 8	0	3	4

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	25.0	39.6	35.4
Large Streams/Rivers (sites w/>50 mi2 drainage):	47.0	0.0	53.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.25	0.40	0.35

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
23.2	36.7	32.9

High Magnitude Causes

Organic Enrichment/DO
Other Habitat Alterations

High Magnitude Sources

Minor Municipal Point Source
Combined Sewer Overflows
Animal Holding/Management Areas
Channelization - Agriculture

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 4

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 4

Total # Bacteria Sites in AU: 13

Other:

Impairment? Indeterminate

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 1 Scheduled Monitoring: 2009

A TMDL is in progress for the Stillwater River basin. Monitoring in support of the TMDL was conducted in 1999.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05080001 140	Stillwater River (upstream Ludlow Creek to mouth); excluding Stillwater R. mainstem	148.0

Aquatic Life Use Assessment

Sampling Year(s): 1999

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH	# Sites Sampled: 4	6	5	10

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	83.3	8.3	8.4
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.83	0.08	0.09

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
123.3	12.3	12.4

High Magnitude Causes

Unionized Ammonia
Nutrients
Organic Enrichment/DO
Other Habitat Alterations

High Magnitude Sources

Major Industrial Point Source
Nonirrigated Crop Production
Urban Runoff/Storm Sewers (NPS)
Onsite Wastewater Systems (Septic Tanks)
Septage Disposal
Channelization - Agriculture
Channelization - Development

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 5

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 5

Total # Bacteria Sites in AU: 19

Other:

Impairment? Yes

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 9 Scheduled Monitoring: 2009

A TMDL is in progress for the Stillwater River basin. Monitoring in support of the TMDL was conducted in 1999.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05080001 150	Mad River (headwaters to downstream Kings Creek)	134.7

Aquatic Life Use Assessment

Sampling Year(s): 1991, 1994

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): CWH				
# Sites Sampled:	1	6	3	3

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	41.7	16.7	41.6
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	16.6	83.4

AU Score (relative amount of attainment)

Full	Partial	Non
0.21	0.17	0.62

Weighted AU Score (relative amount of attainment weighted by AU size)

Full	Partial	Non
28.0	22.4	84.3

High Magnitude Causes

Flow Alteration
Other Habitat Alterations

High Magnitude Sources

Channelization - Agriculture
Habitat Modifications o/than hydromod.

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 1

Scheduled Monitoring: 2003

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05080001 160	Mad River (downstream Kings Creek to downstream Chapman Creek)	153.5

Aquatic Life Use Assessment

Sampling Year(s): 1991, 1994

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): CWH,WWH

Sites Sampled: 3 4 4 5

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	62.5	25.0	12.5
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	100.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.31	0.63	0.06

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
48.0	96.0	9.5

High Magnitude Causes

Organic Enrichment/DO
Other Habitat Alterations

High Magnitude Sources

Minor Municipal Point Source
Channelization - Agriculture
Habitat Modifications other than Hydromod.

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
>5000 colonies/100 ml. fecal coliform bacteria:
>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 2

Scheduled Monitoring: 2003

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
05080001 170	Buck Creek	140.6

Aquatic Life Use Assessment

Sampling Year(s): 1994

	<u>Sampling Site Size Distribution (mi2)</u>			
	<5	5-20	20-50	>50
Aquatic Life Use(s): CWH,WWH	# Sites Sampled:	0	0	1
		0	6	6

Impairment? Yes

	<u>% Attainment</u>		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	100.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	82.9	17.1	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.91	0.09	0.00

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
128.5	12.1	0.0

High Magnitude Causes

Other Habitat Alterations

High Magnitude Sources

Channelization - Development

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 3

Scheduled Monitoring: 2003

Most of the data are from the lower portion of this basin.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05080001 180	Mad River (downstream Chapman Creek to upstream Mud Creek); excluding Buck Cr. and Mad R. mainstem	128.2

Aquatic Life Use Assessment

Sampling Year(s): 1991, 1992, 1994

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): CWH,EWH,WWH				
# Sites Sampled:	2	4	0	6

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	100.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	72.5	27.5

AU Score
(relative amount of attainment)

Full	Partial	Non
0.00	0.36	0.64

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.0	46.5	81.7

High Magnitude Causes

Siltation
Organic Enrichment/DO
Flow Alteration
Other Habitat Alterations

High Magnitude Sources

Combined Sewer Overflow
Channelization - Agriculture
Habitat Modifications o/than hydromod.
Source Unknown

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 1

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 1

Total # Bacteria Sites in AU: 1

Other:

Impairment? Indeterminate

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for the Mad River (Carp, Largemouth Bass). The area under the advisory is from U.S. Rt. 36 in Urbana to the mouth in Dayton. Additionally, a "One Meal per Week" advisory (White Sucker) is in effect for the same stretch of the river.

Integrated Report Assessment Category: 5

Priority: 2

Scheduled Monitoring: 2003

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05080001 190	Mad River (upstream Mud Creek to mouth); excluding Mad R. mainstem	100.4

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH,MWH-C	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0

High Magnitude Causes

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3

Priority:

Scheduled Monitoring: 2003

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment.

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
05080001 200	Great Miami River (upstream Honey Creek to upstream Mad River); excluding GMR mainstem	143.4

Aquatic Life Use Assessment

Sampling Year(s):	<u>Sampling Site Size Distribution (mi2)</u>			
	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH,LRW	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	<u>% Attainment</u>		
	<u>Full</u>	<u>Partial</u>	<u>Non</u>
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

<u>AU Score</u> (relative amount of attainment)		
<u>Full</u>	<u>Partial</u>	<u>Non</u>
0.00	0.00	0.00

<u>Weighted AU Score</u> (relative amount of attainment weighted by AU size)		
<u>Full</u>	<u>Partial</u>	<u>Non</u>
0.0	0.0	0.0

High Magnitude Causes

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
 >5000 colonies/100 ml. fecal coliform bacteria:
 >576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3

Priority:

Scheduled Monitoring: 2008

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05080002 010	Great Miami River (downstream Mad River to upstream Bear Creek); excluding GMR 143.7 mainstem	

Aquatic Life Use Assessment

Sampling Year(s): 1995, 1997, 2001

Sampling Site Size Distribution (mi2)

		<5	5-20	20-50	>50
Aquatic Life Use(s): WWH,LRW	# Sites Sampled:	3	4	2	9

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	20.8	39.6	39.6
Large Streams/Rivers (sites w/>50 mi2 drainage):	61.3	31.1	7.6

AU Score
(relative amount of attainment)

Full	Partial	Non
0.41	0.35	0.24

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
59.1	50.7	33.9

High Magnitude Causes

Pesticides
Priority Organics
Other Inorganics
Nutrients
Siltation
Flow Alteration
Other Habitat Alterations
Oil and Grease

High Magnitude Sources

Major Industrial Point Source
Municipal Point Source
Highway/Roads/Bridge/Sewer Line
Urban Runoff/Storm Sewers (NPS)
Highway Maintenance and Runoff
Contaminated Sediments
Spills

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria:

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 3

Scheduled Monitoring: 2009

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05080002 020	Great Miami River (upstream Bear Creek to upstream Twin Creek); excluding GMR mainstem	140.2

Aquatic Life Use Assessment

Sampling Year(s): 1995

	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH,MWH-C	# Sites Sampled: 1	2	3	0

Impairment? Yes

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	45.8	54.2	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)		
Full	Partial	Non
0.46	0.54	0.00

Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non
64.2	76.0	0.0

High Magnitude Causes

Organic Enrichment/DO
Flow Alteration
Other Habitat Alterations

High Magnitude Sources

Municipal Point Source
Urban Runoff/Storm Sewers (NPS)
Channelization - Agriculture
Channelization - Development
Removal of Riparian Vegetation - Ag.

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
>5000 colonies/100 ml. fecal coliform bacteria:
>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:
Total # Bacteria Sites in AU: 0
Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 4

Scheduled Monitoring: 2009

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05080002 030	Twin Creek (headwaters to upstream Bantas Fork)	157.3

Aquatic Life Use Assessment

Sampling Year(s): 1995

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH				
# Sites Sampled:	0	12	6	8

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	58.3	25.0	16.7
Large Streams/Rivers (sites w/>50 mi2 drainage):	70.0	30.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.64	0.28	0.08

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
101.0	43.3	13.0

High Magnitude Causes

Nutrients
Siltation
Organic Enrichment/DO
Natural Limits (Wetlands)

High Magnitude Sources

Municipal Point Sources
Nonirrigated Crop Production
Land Development/Suburbanization
Onsite Wastewater Sysytems (Septic Tanks)
Natural

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 4

Scheduled Monitoring: 2004

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05080002 040	Twin Creek (upstream Bantas Fork to mouth)	159.0

Aquatic Life Use Assessment

Sampling Year(s): 1995

Aquatic Life Use(s): EWH,WWH

Impairment? Yes

	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
# Sites Sampled:	7	7	5	10

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	89.3	10.7	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	100.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.95	0.05	0.00

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
150.4	8.6	0.0

High Magnitude Causes

Nutrients

High Magnitude Sources

Municipal Point Sources
Nonirrigated Crop Production

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

A "One Meal per Week" Fish Consumption Advisory is in effect for Twin Creek (Channel Catfish). The area under the advisory includes the entire length of the stream.

Integrated Report Assessment Category: 5

Priority: 3

Scheduled Monitoring: 2004

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05080002 050	Great Miami River (downstream Twin Creek to upstream Fourmile Creek); excluding GMR mainstem	189.2

Aquatic Life Use Assessment

Sampling Year(s): 2000

Sampling Site Size Distribution (mi2)

		<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH,MWH-C	# Sites Sampled:	1	10	9	0

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	42.8	27.2	30.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score
(relative amount of attainment)

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.43	0.27	0.30

Full	Partial	Non
81.0	51.5	56.7

High Magnitude Causes

Priority Organics	pH
Metals	Siltation
Copper	Organic Enrichment/ DO
Zinc	Salinity/TDS/Chlorides
Selenium	Flow Alterations
Nickel	Suspended Solids
Unionized Ammonia	
Nutrients	

High Magnitude Sources

Industrial Point Sources
Combined Sewer OverflowS
Nonirrigated Crop Production
Land Development/Suburbanization
Urban Runoff/Storm Sewers (NPS)
Landfills
Spills
Natural

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other: A "Dermal Contact Advisory" is in effect for Dicks Creek due to PCBs contamination. The area under the advisory is from Oxford St. in Middletown to the Great Miami River.

Impairment? Yes

Fish Consumption Assessment

A "Do Not Eat" Fish Consumption Advisory is in effect for Dicks Creek (all species) due to PCBs contamination. The area under the advisory is from Oxford St. in Middletown to the Great Miami River.

Integrated Report Assessment Category: 5

Priority: 4

Scheduled Monitoring: 2009

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05080002 060	Sevenmile Creek	137.2

Aquatic Life Use Assessment

Sampling Year(s): 1991, 1994

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH				
# Sites Sampled:	0	2	5	3

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	90.0	10.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	68.7	31.3	0.0

AU Score (relative amount of attainment)

Full	Partial	Non
0.79	0.21	0.00

High Magnitude Causes

Weighted AU Score (relative amount of attainment weighted by AU size)

Full	Partial	Non
108.9	28.3	0.0

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 4 Scheduled Monitoring: 2010

A TMDL is in progress for the Sevenmile Creek watershed. Monitoring in support of the TMDL was conducted in 2002.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05080002 070	Fourmile Creek (excluding Sevenmile Creek)	160.6

Aquatic Life Use Assessment

Sampling Year(s): 1991, 1996

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH				
# Sites Sampled:	2	1	3	10

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	100.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	94.8	5.2	0.0

AU Score (relative amount of attainment)

Full	Partial	Non
0.97	0.03	0.00

Weighted AU Score (relative amount of attainment weighted by AU size)

Full	Partial	Non
156.4	4.2	0.0

High Magnitude Causes

Unionized Ammonia
Organic Enrichment/DO
Flow Alteration
Suspended Solids

High Magnitude Sources

Major Industrial Point Source
Major Municipal Point Source
Nonirrigated Crop Production
Natural
Upstream Impoundment

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 3

Scheduled Monitoring: 2004

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05080002 080	Indian Creek	71.9

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)				
	<5	5-20	20-50	>50	
Aquatic Life Use(s): EWH	# Sites Sampled:	0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.00	0.00	0.00

High Magnitude Causes

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.0	0.0	0.0

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
>5000 colonies/100 ml. fecal coliform bacteria:
>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3

Priority:

Scheduled Monitoring: 2010

Only biological reference sites have been sampled since 1985.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05080002 090	Great Miami River (downstream Fourmile Creek to mouth); excluding Indian Creek and GMR mainstem	166.2

Aquatic Life Use Assessment

Sampling Year(s): 1991, 1995, 1999, 2000

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	6	6	0	0

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	58.3	25.0	16.7
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.58	0.25	0.17

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
96.9	41.6	27.7

High Magnitude Causes

Cause Unknown
Flow Alteration
Other Habitat Alterations

High Magnitude Sources

Land Development/Suburbanization
Urban Runoff/Storm Sewers (NPS)
Removal of Riparian Vegetation - Dev.
Natural

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for the Hamilton Hydraulic Canal (Channel Catfish, Carp). The area under the advisory is from the Power Plant Spillway in Hamilton to the Great Miami River.

Integrated Report Assessment Category: 5 Priority: 4 Scheduled Monitoring: 2011

Recent tributary data within this watershed is sparse. Paddys Run was sampled recently, but all other tributaries (Taylor Creek basin) have data which are over 10 years old. One biological reference site on Bluerock Creek was sampled in 1996.

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
05080003 070	East Fork Whitewater River	70.6

Aquatic Life Use Assessment

Sampling Year(s):	<u>Sampling Site Size Distribution (mi2)</u>			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	<u>% Attainment</u>		
	<u>Full</u>	<u>Partial</u>	<u>Non</u>
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

<u>AU Score</u> (relative amount of attainment)			<u>Weighted AU Score</u> (relative amount of attainment weighted by AU size)		
<u>Full</u>	<u>Partial</u>	<u>Non</u>	<u>Full</u>	<u>Partial</u>	<u>Non</u>
0.00	0.00	0.00	0.0	0.0	0.0
<u>High Magnitude Causes</u>			<u>High Magnitude Sources</u>		

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
 >5000 colonies/100 ml. fecal coliform bacteria: 2
 >576 colonies/100 ml. E. coli bacteria):
 # Sites in AU w/ Bacteria Violations: 1
 Total # Bacteria Sites in AU: 1
 Other:

Impairment? Indeterminate

Fish Consumption Assessment

Integrated Report Assessment Category: 3 Priority: Scheduled Monitoring: 2010

This short segment in Ohio has not been sampled since 1982. Sampling at one biological reference site on Welker Lateral (headwaters of East Fork), has been attempted several times in the last few years, but has been dry.

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
05080003 080	Whitewater River (downstream East Fork Whitewater R. [IN] to mouth); excluding Whitewater R mainstem	74.7

Aquatic Life Use Assessment

Sampling Year(s): 1995, 1996

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH				
# Sites Sampled:	0	0	2	4

Impairment? No

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	100.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	100.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
1.00	0.00	0.00

High Magnitude Causes

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
74.7	0.0	0.0

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 2

Priority:

Scheduled Monitoring: 2010

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05090101 010	Ohio River tributaries (downstream Campaign Creek to upstream Raccoon Creek)	45.4

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)				
	<5	5-20	20-50	>50	
Aquatic Life Use(s): WWH	# Sites Sampled:	0	0	0	0

Impairment? Unknown	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0
<u>High Magnitude Causes</u>			<u>High Magnitude Sources</u>		

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
 >5000 colonies/100 ml. fecal coliform bacteria:
 >576 colonies/100 ml. E. coli bacteria):
 # Sites in AU w/ Bacteria Violations:
 Total # Bacteria Sites in AU: 0
 Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 **Priority:** **Scheduled Monitoring: 2009**
 Very little data have been collected in this watershed. Two streams were sampled near Gallipolis in 1987.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05090101 020	Raccoon Creek (headwaters to upstream Hewett Fork)	135.5

Aquatic Life Use Assessment

Sampling Year(s): 1995, 1996, 2000

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH,LRW				
# Sites Sampled:	7	5	3	4

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	5.0	28.8	66.2
Large Streams/Rivers (sites w/>50 mi2 drainage):	46.9	53.1	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.25	0.41	0.34

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
35.1	55.6	44.8

High Magnitude Causes

Metals
Zinc
Iron
Aluminum
Other Metal
pH
Siltation
Other Habitat Alterations

High Magnitude Sources

Nonirrigated Crop Production
Surface Mining
Acid Mine Drainage
Natural

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 1 Scheduled Monitoring: 2009

A TMDL is in progress for the upper Raccoon Creek basin. Monitoring in support of the TMDL was conducted in 1995 and 2000.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05090101 030	Raccoon Creek (upstream Hewett Fork to downstream Elk Fork)	155.0

Aquatic Life Use Assessment

Sampling Year(s): 1995, 2000

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): WWH,LRW

Sites Sampled:

<5	5-20	20-50	>50
12	9	3	4

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	26.4	51.4	22.2
Large Streams/Rivers (sites w/>50 mi2 drainage):	52.9	47.1	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.40	0.49	0.11

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
61.5	76.3	17.2

High Magnitude Causes

Cause Unknown
Metals
Zinc
Iron
Other Metals
Nutrients
pH
Siltation

Salinity /TDS/ Chlorides
Oil and Grease

High Magnitude Sources

Minor Industrial Point Source
Surface Mining
Subsurface Mining
Petroleum Activities
Acid Mine Drainage
Source Unknown

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 4 Scheduled Monitoring: 2009

A TMDL is in progress for the upper Raccoon Creek basin. Monitoring in support of the TMDL was conducted in 1995 and 2000.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05090101 040	Raccoon Creek (downstream Elk Fork to upstream Little Raccoon Creek)	95.0

Aquatic Life Use Assessment

Sampling Year(s): 1995, 1998

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH,LRW				
# Sites Sampled:	6	5	0	3

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	45.0	26.7	28.3
Large Streams/Rivers (sites w/>50 mi2 drainage):	20.5	79.5	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.33	0.53	0.14

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
31.2	50.4	13.4

High Magnitude Causes

Metals
Zinc
Iron
Other Metals
pH
Siltation
Flow Alteration
Natural Limits (Wetlands)

High Magnitude Sources

Nonirrigated Crop Production
Mining
Acid Mine Drainage
Natural
Source Unknown

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 2 Scheduled Monitoring: 2009

A TMDL is in progress for the upper Raccoon Creek basin. Monitoring in support of the TMDL was conducted in 1995 and 2000.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05090101 050	Little Raccoon Creek	154.6

Aquatic Life Use Assessment

Sampling Year(s): 1995, 1999

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH,LRW				
# Sites Sampled:	8	4	0	0

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	6.3	93.7
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	100.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.00	0.53	0.47

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.0	81.9	72.7

High Magnitude Causes

Metals
Nickel
Iron
Aluminum
Other Metals
Nutrients
pH
Siltation

Organic Enrichment/ DO
Salinity/TDS/Chlorides
Thermal Modifications
Other Habitat Alterations

High Magnitude Sources

Minor Industrial Point Source
Major Municipal Point Source
Nonirrigated Crop Production
Pasture Land
Confined Animal Feeding Operations (NPS)
Mine Tailings
Acid Mine Drainage
Removal of Riparian Vegetation - Ag.

Source Unknown

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 1

Scheduled Monitoring: 2009

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05090101 060	Raccoon Creek (downstream Little Raccoon Creek to mouth); excluding Raccoon Creek mainstem	140.8

Aquatic Life Use Assessment

Sampling Year(s): 1999

	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled: 4	6	0	0

Impairment? Yes

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	37.5	8.3	54.2
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)		
Full	Partial	Non
0.38	0.08	0.54

Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non
52.8	11.7	76.3

High Magnitude Causes

Cause Unknown
Metals
Nutrients
Flow Alteration

High Magnitude Sources

Minor Industrial Point Source
Nonirrigated Crop Production
Animal Holding/Management Areas
Natural
Source Unknown

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 1

Scheduled Monitoring: 2009

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05090101 070	Ohio River tributaries (downstream Raccoon Creek to upstream Symmes Creek)	139.0

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0
<u>High Magnitude Causes</u>			<u>High Magnitude Sources</u>		

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 **Priority:** **Scheduled Monitoring: 2009**

The only data from this watershed are from 2 sites on Indian Guyan Creek, sampled in 1990. Indian Guyan Creek is currently listed on the 303(d) list, but the limited amount of data from 1990 is not adequate to justify keeping the entire HUC on the list.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05090101 080	Symmes Creek (headwaters to downstream Black Fork)	119.1

Aquatic Life Use Assessment

Sampling Year(s):

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): WWH

Sites Sampled:

<5	5-20	20-50	>50
0	0	0	0

Impairment? Unknown

% Attainment

Small Streams (sites w/<50 mi2 drainage):

Large Streams/Rivers (sites w/>50 mi2 drainage):

Full	Partial	Non
0.0	0.0	0.0
0.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.00	0.00	0.00

High Magnitude Causes

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.0	0.0	0.0

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3

Priority:

Scheduled Monitoring: 2009

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment. Very little data have been collected throughout the Symmes Creek watershed.

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
05090101 090	Symmes Creek (downstream Black Fork to downstream Buffalo Creek)	100.3

Aquatic Life Use Assessment

Sampling Year(s):	<u>Sampling Site Size Distribution (mi2)</u>			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled:	0	0	0

Impairment? Unknown	<u>% Attainment</u>		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

<u>AU Score</u> (relative amount of attainment)			<u>Weighted AU Score</u> (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0
<u>High Magnitude Causes</u>			<u>High Magnitude Sources</u>		

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
 >5000 colonies/100 ml. fecal coliform bacteria:
 >576 colonies/100 ml. E. coli bacteria):
 # Sites in AU w/ Bacteria Violations:
 Total # Bacteria Sites in AU: 0
 Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 Priority: Scheduled Monitoring: 2009

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment. Buffalo Creek is currently listed on the 303(d) list, but the limited amount of data from 1990 are not adequate to justify keeping the entire HUC on the list. Another survey of this stream is needed to reassess the status.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05090101 100	Symmes Creek (downstream Buffalo Creek to mouth); Ohio River tributaries (Symmes Cr. to Big Sandy R)	151.5

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0

High Magnitude Causes

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for Symmes Creek (Freshwater Drum, Sauger). The area under the advisory is from St. Rt. 41 at Waterloo to the Ohio River.

Integrated Report Assessment Category: 3

Priority:

Scheduled Monitoring: 2009

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment. Very little data have been collected throughout the Symmes Creek watershed. Symmes Creek is currently listed on the 303(d) list, but limited amount of data from 1990 are not adequate to justify keeping the entire HUC on the list. Another survey of this stream is needed to reassess the status.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05090103 010	Ohio River tributaries (downstream Big Sandy River [WV] to upstream Pine Creek)	130.4

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH,LRW,LWH	# Sites Sampled:	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.00	0.00	0.00

High Magnitude Causes

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.0	0.0	0.0

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
>5000 colonies/100 ml. fecal coliform bacteria:
>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 **Priority:** **Scheduled Monitoring: 2009**

Very little data have been collected in this watershed. Only Ice Creek and Storms Creek have been sampled, both in 1990. Ice Creek is currently listed on the 303(d) list, but data from 1990 are not adequate to justify keeping it on the list. Another survey of this stream is needed to reassess the status.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05090103 020	Pine Creek	184.2

Aquatic Life Use Assessment

Sampling Year(s): 1996, 1997

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): WWH

	<5	5-20	20-50	>50
# Sites Sampled:	6	1	5	2

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	36.6	20.0	43.4
Large Streams/Rivers (sites w/>50 mi2 drainage):	100.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.68	0.10	0.22

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
125.8	13.4	40.0

High Magnitude Causes

Metals
pH
Siltation
Salinity/TDS/Chlorides

High Magnitude Sources

Surface Mining
Mine Tailings
Acid Mine Drainage

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 3

Scheduled Monitoring: 2009

Most of the data are from the upper portion of the watershed.

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
05090103 030	Little Scioto River (headwaters to upstream Rocky Fork)	107.8

Aquatic Life Use Assessment

Sampling Year(s):	<u>Sampling Site Size Distribution (mi2)</u>				
	<table border="0" style="width:100%"> <tr> <td style="width:25%"><u><5</u></td> <td style="width:25%"><u>5-20</u></td> <td style="width:25%"><u>20-50</u></td> <td style="width:25%"><u>>50</u></td> </tr> </table>	<u><5</u>	<u>5-20</u>	<u>20-50</u>	<u>>50</u>
<u><5</u>	<u>5-20</u>	<u>20-50</u>	<u>>50</u>		
Aquatic Life Use(s): WWH	# Sites Sampled: 0 0 0 0				

Impairment? Unknown	<u>% Attainment</u>			
	<table border="0" style="width:100%"> <tr> <td style="width:33%"><u>Full</u></td> <td style="width:33%"><u>Partial</u></td> <td style="width:33%"><u>Non</u></td> </tr> </table>	<u>Full</u>	<u>Partial</u>	<u>Non</u>
<u>Full</u>	<u>Partial</u>	<u>Non</u>		
Small Streams (sites w/<50 mi2 drainage):	0.0 0.0 0.0			
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0 0.0 0.0			

<u>AU Score</u> (relative amount of attainment)	<u>Weighted AU Score</u> (relative amount of attainment weighted by AU size)												
<table border="0" style="width:100%"> <tr> <td style="width:33%"><u>Full</u></td> <td style="width:33%"><u>Partial</u></td> <td style="width:33%"><u>Non</u></td> </tr> <tr> <td>0.00</td> <td>0.00</td> <td>0.00</td> </tr> </table>	<u>Full</u>	<u>Partial</u>	<u>Non</u>	0.00	0.00	0.00	<table border="0" style="width:100%"> <tr> <td style="width:33%"><u>Full</u></td> <td style="width:33%"><u>Partial</u></td> <td style="width:33%"><u>Non</u></td> </tr> <tr> <td>0.0</td> <td>0.0</td> <td>0.0</td> </tr> </table>	<u>Full</u>	<u>Partial</u>	<u>Non</u>	0.0	0.0	0.0
<u>Full</u>	<u>Partial</u>	<u>Non</u>											
0.00	0.00	0.00											
<u>Full</u>	<u>Partial</u>	<u>Non</u>											
0.0	0.0	0.0											
<u>High Magnitude Causes</u>	<u>High Magnitude Sources</u>												

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
 >5000 colonies/100 ml. fecal coliform bacteria:
 >576 colonies/100 ml. E. coli bacteria):
 # Sites in AU w/ Bacteria Violations:
 Total # Bacteria Sites in AU: 0
 Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3 Priority: Scheduled Monitoring: 2009

The only sampling done in the Little Scioto River basin was in 1990. Bear Run is currently listed on the 303(d) list, but data from this small stream are not adequate to justify keeping the entire HUC on the 303(d) list.

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
05090103 040	Little Scioto River (upst. Rocky Fork to mouth); Ohio R. tribs. (dst Pine Cr. to dst 8-digit divide)	152.2

Aquatic Life Use Assessment

Sampling Year(s):	Sampling Site Size Distribution (mi2)			
	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled: 0	0	0	0

Impairment? Unknown

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)			Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non	Full	Partial	Non
0.00	0.00	0.00	0.0	0.0	0.0

High Magnitude Causes

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
>5000 colonies/100 ml. fecal coliform bacteria:
>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for the Little Scioto River (Rock Bass, Spotted Bass). The area under the advisory includes the entire length of the river.

Integrated Report Assessment Category: 3

Priority:

Scheduled Monitoring: 2009

Sampling was done in the Little Scioto River basin in 1990. The only data since then is from one biological reference site on the mainstem.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05090201 010	Ohio River tributaries (downstream 8-digit divide to upstream Ohio Brush Creek)	136.9

Aquatic Life Use Assessment

Sampling Year(s): 1997, 1999, 2000

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): CWH,EWH,WWH	0	5	2	0
# Sites Sampled:	0	5	2	0

Impairment? No

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	75.0	25.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)

Full	Partial	Non
0.75	0.25	0.00

Weighted AU Score (relative amount of attainment weighted by AU size)

Full	Partial	Non
102.7	34.2	0.0

High Magnitude Causes

Siltation

High Magnitude Sources

Land Development/Suburbanization

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 2

Priority:

Scheduled Monitoring: 2011

Impairment in this watershed is in onesmall segment of Turkey Creek, related to siltation from a constructionsite.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05090201 030	Ohio Brush Creek (headwaters to downstream Baker Fork)	130.0

Aquatic Life Use Assessment

Sampling Year(s): 1997, 2001

		Sampling Site Size Distribution (mi2)			
		<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH	# Sites Sampled:	0	2	4	0

Impairment? Yes

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	87.5	12.5	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)		
Full	Partial	Non
0.88	0.12	0.00

Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non
113.8	16.2	0.0

High Magnitude Causes

Nutrients

High Magnitude Sources

Nonirrigated Crop Production

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 3 Scheduled Monitoring: 2011

Only biological reference sites have been sampled since 1987.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05090201 040	West Fork Ohio Brush Creek	134.1

Aquatic Life Use Assessment

Sampling Year(s): 2001

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): EWH,WWH

Sites Sampled:

<5	5-20	20-50	>50
0	5	3	8

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	90.0	0.0	10.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	100.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.95	0.00	0.05

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
127.4	0.0	6.7

High Magnitude Causes

Cause Unknown
Flow Alteration

High Magnitude Sources

Natural
Source Unknown

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5 **Priority: 2** **Scheduled Monitoring: 2011**

Only biological reference sites have been sampled since 1987. Some nonattainment is due to natural low flow conditions.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05090201 050	Ohio Brush Creek (downstream Baker Fork to mouth);excluding West Fork)	170.7

Aquatic Life Use Assessment

Sampling Year(s): 1997, 2001

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH				
# Sites Sampled:	3	9	0	3

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	66.7	0.0	33.3
Large Streams/Rivers (sites w/>50 mi2 drainage):	100.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.83	0.00	0.17

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
142.2	0.0	28.5

High Magnitude Causes

Cause Unknown
Organic Enrichment/DO
Flow Alteration

High Magnitude Sources

Onsite Wastewater Systems (Septic Tanks)
Natural
Source Unknown

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 2

Scheduled Monitoring: 2011

Only biological reference sites have been sampled since 1987.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05090201 060	Ohio River tributaries (downstream Ohio Brush Creek to upstream Eagle Creek)	67.9

Aquatic Life Use Assessment

Sampling Year(s): 1997, 2001

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH				
# Sites Sampled:	0	2	4	0

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	87.5	12.5	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score
(relative amount of attainment)

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.88	0.12	0.00

Full	Partial	Non
59.4	8.5	0.0

High Magnitude Causes

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
>5000 colonies/100 ml. fecal coliform bacteria:
>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 4

Scheduled Monitoring: 2011

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05090201 070	Eagle Creek	151.7

Aquatic Life Use Assessment

Sampling Year(s): 1997

Aquatic Life Use(s): EWH,WWH	# Sites Sampled:	Sampling Site Size Distribution (mi2)			
		<5	5-20	20-50	>50
		2	0	1	4

Impairment? Yes

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	100.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	75.9	24.1	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.88	0.12	0.00

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
133.5	18.2	0.0

High Magnitude Causes

Cause Unknown
Nutrients

High Magnitude Sources

Nonirrigated Crop Production
Source Unknown

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria:

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 3

Scheduled Monitoring: 2011

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05090201 080	Ohio River tributaries (downstream Eagle Creek to upstream Whiteoak Creek)	93.6

Aquatic Life Use Assessment

Sampling Year(s): 1997

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): EWH,WWH

Sites Sampled:

<5	5-20	20-50	>50
0	2	1	1

Impairment? Yes

% Attainment

Small Streams (sites w/<50 mi2 drainage):

Large Streams/Rivers (sites w/>50 mi2 drainage):

Full	Partial	Non
0.0	50.0	50.0
0.0	100.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.00	0.75	0.25

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.0	70.2	23.4

High Magnitude Causes

Cause Unknown
Flow Alteration

High Magnitude Sources

Land Development/Suburbanization
Natural

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 2

Scheduled Monitoring: 2011

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05090201 090	East Fork Whiteoak Creek; North Fork Whiteoak Creek	147.4

Aquatic Life Use Assessment

Sampling Year(s): 1997

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH				
# Sites Sampled:	0	2	1	4

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	50.0	0.0	50.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	100.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.75	0.00	0.25

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
110.6	0.0	36.8

High Magnitude Causes

Organic Enrichment/DO
Flow Alteration

High Magnitude Sources

Minor Municipal Point Source
Natural

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 3

Scheduled Monitoring: 2006

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05090201 100	Whiteoak Creek (North Fork/East Fork to mouth)	87.9

Aquatic Life Use Assessment

Sampling Year(s): 1997

		Sampling Site Size Distribution (mi2)			
		<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH,LRW	# Sites Sampled:	4	1	1	4

Impairment? Yes

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	62.5	0.0	37.5
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	100.0	0.0

AU Score (relative amount of attainment)		
Full	Partial	Non
0.31	0.50	0.19

Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non
27.2	44.0	16.7

High Magnitude Causes

Nutrients
Siltation
Flow Alteration

High Magnitude Sources

Minor Municipal Point Source
Nonirrigated Crop Production

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 2

Scheduled Monitoring: 2006

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05090201 110	Ohio River tributaries (downstream Whiteoak Creek to upstream Big Indian Run)	97.4

Aquatic Life Use Assessment

Sampling Year(s):

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	0	0	0	0

Impairment? Unknown

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.00	0.00	0.00

High Magnitude Causes

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.0	0.0	0.0

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3

Priority:

Scheduled Monitoring: 2011

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment.

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
05090201 120	Ohio River tributaries (upstream Big Indian Run to upstream Little Miami River)	108.2

Aquatic Life Use Assessment

Sampling Year(s): 1991, 1997

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): WWH

	<u><5</u>	<u>5-20</u>	<u>20-50</u>	<u>>50</u>
# Sites Sampled:	1	2	1	0

Impairment? No

% Attainment

	<u>Full</u>	<u>Partial</u>	<u>Non</u>
Small Streams (sites w/<50 mi2 drainage):	75.0	25.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score
(relative amount of attainment)

<u>Full</u>	<u>Partial</u>	<u>Non</u>
0.75	0.25	0.00

Weighted AU Score
(relative amount of attainment weighted by AU size)

<u>Full</u>	<u>Partial</u>	<u>Non</u>
81.1	27.1	0.0

High Magnitude Causes

Cause Unknown

High Magnitude Sources

Source Unknown

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 2

Priority:

Scheduled Monitoring: 2011

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05090202 010	Little Miami River (headwaters to upstream Massies Creek)	129.6

Aquatic Life Use Assessment

Sampling Year(s): 1998

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH				
# Sites Sampled:	3	8	3	4

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	74.0	9.4	16.6
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	54.2	45.8

AU Score
(relative amount of attainment)

Full	Partial	Non
0.37	0.32	0.31

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
47.9	41.2	40.5

High Magnitude Causes

Metals
Unionized Ammonia
Nutrients
Organic Enrichment/DO
Flow Alteration
Other Habitat Alterations
Pathogens

High Magnitude Sources

Minor Municipal Point Source
Nonirrigated Crop Production
Range Grazing - Riparian Manure Lagoons
Channelization - Agriculture
Removal of Riparian Vegetation - Ag.
Source Unknown

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 2

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 2

Total # Bacteria Sites in AU: 17

Other:

Impairment? Indeterminate

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for the Little Miami River (Sauger). The area under the advisory includes the entire length of the river. Additionally, a "One Meal per Week" advisory is in effect (Channel Catfish, Smallmouth Bass).

Integrated Report Assessment Category: 4A Priority: Scheduled Monitoring: 2012

A TMDL was completed and approved by the USEPA in 2002. Monitoring in support of the TMDL was conducted in 1998.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05090202 020	Little Miami River (upstream Massies Creek to downstream Beaver Creek)	165.5

Aquatic Life Use Assessment

Sampling Year(s): 1998

Sampling Site Size Distribution (mi2)

		<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH	# Sites Sampled:	2	11	7	2

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	47.6	21.4	31.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	71.0	16.0	13.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.59	0.19	0.22

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
98.1	31.0	36.4

High Magnitude Causes

Cause Unknown
Unknown Toxicity
Metals
Unionized Ammonia
Nutrients
Siltation
Other Habitat Alterations
Pathogens

Oil and Grease
Natural Limits (Wetlands)

High Magnitude Sources

Major Industrial Point Source
Major Municipal Point Source
Nonirrigated Crop Production
Pasture Land
Urban Runoff/Storm Sewers (NPS)
Onsite Wastewater Systems (Septic Tanks)
Channelization - Agriculture
Channelization - Development

Spills

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 3

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 3

Total # Bacteria Sites in AU: 23

Other:

Impairment? Indeterminate

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for the Little Miami River (Sauger). The area under the advisory includes the entire length of the river. Additionally, a "One Meal per Week" advisory is in effect (Channel Catfish, Smallmouth Bass).

Integrated Report Assessment Category: 4A Priority: Scheduled Monitoring: 2012

A TMDL was completed and approved by the USEPA in 2002. Monitoring in support of the TMDL was conducted in 1998.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05090202 030	Little Miami River (downstream Beaver Creek to upstream Caesar Creek)	119.2

Aquatic Life Use Assessment

Sampling Year(s): 1998

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH	3	6	1	10

Impairment? Yes

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	95.8	0.0	4.2
Large Streams/Rivers (sites w/>50 mi2 drainage):	29.4	70.6	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.63	0.35	0.02

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
74.6	42.1	2.5

High Magnitude Causes

Unionized Ammonia
Chlorine
Nutrients
Organic Enrichment/DO
Flow Alteration
Suspended Solids

High Magnitude Sources

Major Municipal Point Source
Minor Municipal Point Source
Natural

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion.

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 0

Total # Bacteria Sites in AU: 8

Other:

Impairment? Indeterminate

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for the Little Miami River (Sauger). The area under the advisory includes the entire length of the river. Additionally, a "One Meal per Week" advisory is in effect (Channel Catfish, Smallmouth Bass).

Integrated Report Assessment Category: 4A Priority: Scheduled Monitoring: 2012

A TMDL was completed and approved by the USEPA in 2002. Monitoring in support of the TMDL was conducted in 1998.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05090202 040	Anderson Fork Caesar Creek	94.8

Aquatic Life Use Assessment

Sampling Year(s): 1998

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): EWH,WWH

	<5	5-20	20-50	>50
# Sites Sampled:	1	4	2	2

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	62.5	12.5	25.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	100.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.31	0.56	0.13

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
29.6	53.3	11.9

High Magnitude Causes

Cause Unknown
Siltation

High Magnitude Sources

Nonirrigated Crop Production
Source Unknown

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria:

Sites in AU w/ Bacteria Violations: 0

Total # Bacteria Sites in AU: 5

Other:

Impairment? No

Fish Consumption Assessment

Integrated Report Assessment Category: 4A **Priority:** **Scheduled Monitoring: 2012**

A TMDL was completed and approved by the USEPA in 2002. Monitoring in support of the TMDL was conducted in 1998.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05090202 050	Caesar Creek (excluding Anderson Fork)	147.9

Aquatic Life Use Assessment

Sampling Year(s): 1998

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH				
# Sites Sampled:	1	2	1	3

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	75.0	25.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	79.7	9.2	11.1

AU Score
(relative amount of attainment)

Full	Partial	Non
0.77	0.17	0.06

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
114.4	25.4	8.1

High Magnitude Causes

Cause Unknown
Nutrients
Siltation
Organic Enrichment/DO
Pathogens

High Magnitude Sources

Nonirrigated Crop Production
Feedlots (Confined Animal Feeding Oper.)
Land Development/Suburbanization
Onsite Wastewater Systems (Septic Tanks)
Source Unknown

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 1

>576 colonies/100 ml. E. coli bacteria:

Sites in AU w/ Bacteria Violations: 1

Total # Bacteria Sites in AU: 12

Other:

Impairment? Indeterminate

Fish Consumption Assessment

Integrated Report Assessment Category: 4A Priority: Scheduled Monitoring: 2012

A TMDL was completed and approved by the USEPA in 2002. Monitoring in support of the TMDL was conducted in 1998.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05090202 060	Little Miami River (downstream Caesar Creek to downstream Turtle Creek); excluding LMR mainstem	116.8

Aquatic Life Use Assessment

Sampling Year(s): 1998

Sampling Site Size Distribution (mi2)

		<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH	# Sites Sampled:	0	0	0	0

Impairment? Unknown

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.00	0.00	0.00

High Magnitude Causes

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.0	0.0	0.0

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3

Priority:

Scheduled Monitoring: 2007

A small amount of data were collected in this watershed, but there are not enough sampling locations to do a complete assessment. Reference sites on Newman Run and Mill Run were sampled in 1998.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05090202 070	Todd Fork (headwaters to upstream East Fork Todd Fork)	147.0

Aquatic Life Use Assessment

Sampling Year(s): 1998

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): EWH,WWH

	<5	5-20	20-50	>50
# Sites Sampled:	2	4	4	4

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	31.3	12.5	56.2
Large Streams/Rivers (sites w/>50 mi2 drainage):	92.1	4.2	3.7

AU Score (relative amount of attainment)

Full	Partial	Non
0.62	0.08	0.30

Weighted AU Score (relative amount of attainment weighted by AU size)

Full	Partial	Non
91.1	11.8	44.1

High Magnitude Causes

Unknown Toxicity
Unionized Ammonia
Organic Enrichment/DO
Flow Alteration
Other Habitat Alterations

High Magnitude Sources

Major Municipal Point Source
Minor Municipal Point Source
Urban Runoff/Storm Sewers (NPS)
Channelization - Development
Natural

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 3

Scheduled Monitoring: 2007

**Ohio EPA 2002 Integrated Report Appendix C
Assessment Unit (AU) Summaries**

HUC11	AU Description	AU Size (mi2)
05090202 080	Todd Fork (downstream East Fork Todd Fork to mouth)	114.6

Aquatic Life Use Assessment

Sampling Year(s): 1998

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): EWH,WWH

	<u><5</u>	<u>5-20</u>	<u>20-50</u>	<u>>50</u>
# Sites Sampled:	0	0	0	3

Impairment? Yes

% Attainment

	<u>Full</u>	<u>Partial</u>	<u>Non</u>
Small Streams (sites w/<50 mi2 drainage):	0.0	0.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	81.5	18.5	0.0

AU Score
(relative amount of attainment)

<u>Full</u>	<u>Partial</u>	<u>Non</u>
0.82	0.18	0.00

Weighted AU Score
(relative amount of attainment weighted by AU size)

<u>Full</u>	<u>Partial</u>	<u>Non</u>
93.4	21.2	0.0

High Magnitude Causes

Nutrients

High Magnitude Sources

Municipal Point Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 4B

Priority:

Scheduled Monitoring: 2007

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05090202 090	Little Miami River (downstream Turtle Creek to downstream O'Bannon Creek); excluding LMR mainstem	110.3

Aquatic Life Use Assessment

Sampling Year(s): 1998

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH	# Sites Sampled: 3	3	2	5

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	41.7	50.0	8.3
Large Streams/Rivers (sites w/>50 mi2 drainage):	85.2	14.8	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.64	0.32	0.04

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
69.9	35.8	4.6

High Magnitude Causes

Nutrients
Organic Enrichment/DO
Flow Alteration

High Magnitude Sources

Major Municipal Point Sources
Upstream Impoundment
Natural

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5

Priority: 4

Scheduled Monitoring: 2007

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05090202 100	East Fork Little Miami River (headwaters to upstream Solomon Run)	140.8

Aquatic Life Use Assessment

Sampling Year(s): 1998

	# Sites Sampled:	Sampling Site Size Distribution (mi2)			
		<5	5-20	20-50	>50
Aquatic Life Use(s): EWH,WWH		1	3	3	2

Impairment? Yes

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	16.7	58.3	25.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	50.0	50.0	0.0

AU Score (relative amount of attainment)		
Full	Partial	Non
0.33	0.54	0.13

Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non
47.0	76.2	17.6

High Magnitude Causes

Cause Unknown
Nutrients
Siltation

High Magnitude Sources

Nonirrigated Crop Production
Surface Mining
Source Unknown

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for the East Fork Little Miami River (Channel Catfish, Flathead Catfish, Rock Bass, Smallmouth Bass, Spotted Bass). The area under the advisory includes the entire length of the river.

Integrated Report Assessment Category: 5

Priority: 3

Scheduled Monitoring: 2012

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05090202 110	East Fork Little Miami River (upstream Solomon Run to upstream Cloverlick Creek)	116.7

Aquatic Life Use Assessment

Sampling Year(s): 1996, 1997, 1998

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): EWH,WWH

	<5	5-20	20-50	>50
# Sites Sampled:	4	2	0	8

Impairment? Yes

% Attainment

Small Streams (sites w/<50 mi2 drainage):

Full	Partial	Non
------	---------	-----

Large Streams/Rivers (sites w/>50 mi2 drainage):

0.0	37.5	62.5
4.2	95.8	0.0

AU Score
(relative amount of attainment)

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.02	0.67	0.31

Full	Partial	Non
2.5	77.8	36.4

High Magnitude Causes

Cause Unknown
Nutrients
Siltation
Organic Enrichment/DO

High Magnitude Sources

Nonirrigated Crop Production
Onsite Wastewater Systems (Septic Tanks)
Source Unknown

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for the East Fork Little Miami River (Channel Catfish, Flathead Catfish, Rock Bass, Smallmouth Bass, Spotted Bass). The area under the advisory includes the entire length of the river.

Integrated Report Assessment Category: 5

Priority: 3

Scheduled Monitoring: 2012

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05090202 120	East Fork Little Miami River (upstream Cloverlick Creek to upstream Stonelick Creek)	123.1

Aquatic Life Use Assessment

Sampling Year(s): 1997, 1998

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): EWH,WWH

	<5	5-20	20-50	>50
# Sites Sampled:	6	6	1	10

Impairment? Yes

% Attainment

Small Streams (sites w/<50 mi2 drainage):

Full	Partial	Non
------	---------	-----

Large Streams/Rivers (sites w/>50 mi2 drainage):

8.4	8.3	83.3
-----	-----	------

15.1	33.6	51.3
------	------	------

AU Score
(relative amount of attainment)

Full	Partial	Non
0.12	0.21	0.67

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
14.5	25.7	82.9

High Magnitude Causes

Nutrients
Siltation
Organic Enrichment/DO
Flow Alteration
Other Habitat Alterations

High Magnitude Sources

Municipal Point Sources
Land Development/Suburbanization
Urban Runoff/Storm Sewers (NPS)
Onsite Wastewater Systems (Septic Tanks)
Channelization - Development
Flow Reg/Mod. - Dev.

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for the East Fork Little Miami River (Channel Catfish, Flathead Catfish, Rock Bass, Smallmouth Bass, Spotted Bass). The area under the advisory includes the entire length of the river.

Integrated Report Assessment Category: 5

Priority: 2

Scheduled Monitoring: 2012

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05090202 130	East Fork Little Miami River (upstream Stonelick Creek to mouth)	119.2

Aquatic Life Use Assessment

Sampling Year(s): 1997, 1998

Aquatic Life Use(s): EWH,WWH	# Sites Sampled:	Sampling Site Size Distribution (mi2)			
		<5	5-20	20-50	>50
		5	6	1	9

Impairment? Yes

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	9.2	72.5	18.3
Large Streams/Rivers (sites w/>50 mi2 drainage):	21.6	78.4	0.0

AU Score (relative amount of attainment)		
Full	Partial	Non
0.15	0.76	0.09

Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non
18.4	89.9	10.9

High Magnitude Causes

Cause Unknown
Nutrients
Siltation
Organic Enrichment/DO
Flow Alteration
Other Habitat Alterations
Pathogens

High Magnitude Sources

Major Municipal Point Source
Combined Sewer Overflows
Sanitary Sewer Overflows
Nonirrigated Crop Production
Sewer Line Construction
Urban Runoff/Storm Sewer (NPS)
Dredging - Development
Dam Construction - Agriculture
Streambank Destabilization - Dev.
Source Unknown

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion:

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for the East Fork Little Miami River (Channel Catfish, Flathead Catfish, Rock Bass, Smallmouth Bass, Spotted Bass). The area under the advisory includes the entire length of the river.

Integrated Report Assessment Category: 5

Priority: 3

Scheduled Monitoring: 2012

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05090203 010	Mill Creek	164.6

Aquatic Life Use Assessment

Sampling Year(s): 1992, 1997

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH,MWH-C,LRW,LWH # Sites Sampled:	6	5	6	10

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	17.5	13.3	69.2
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	5.6	94.4

AU Score
(relative amount of attainment)

Full	Partial	Non
0.09	0.09	0.82

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
14.5	15.5	134.6

High Magnitude Causes

Cause Unknown
Unknown Toxicity
Unionized Ammonia
Nutrients
Organic Enrichment/DO
Flow Alteration
Other Habitat Alterations
Oil and Grease
Taste and Odor

High Magnitude Sources

Industrial Point Sources
Major Municipal Point Source
Combined Sewer Overflow
Urban Runoff/Storm Sewers (NPS)
Channelization - Development
Streambank Destabilization - Dev.

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

A "One Meal per Month" Fish Consumption Advisory is in effect for Mill Creek (all species). The area under the advisory is from I-275 to the Ohio River.

Integrated Report Assessment Category: 5 Priority: 2 Scheduled Monitoring: 2012

A TMDL for the Mill Creek watershed is underway. Monitoring in support of the TMDL was conducted in 1997. Follow-up monitoring in the upper Mill Creek watershed was conducted in 2002.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05090202 140	Little Miami River (downstream O'Bannon Creek to mouth); excluding East Fork LMR 112.4 and LMR mainstem	

Aquatic Life Use Assessment

Sampling Year(s): 1991, 1994, 1998

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH,LRW				
# Sites Sampled:	5	5	2	0

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	10.0	55.0	35.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.10	0.55	0.35

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
11.2	61.8	39.4

High Magnitude Causes

Unknown Toxicity
Siltation
Organic Enrichment/DO
Flow Alteration
Other Habitat Alterations

High Magnitude Sources

Minor Industrial Point Source
Major Municipal Point Source
Combined Sewer Overflows
Sewer Line Construction
Other Urban Runoff
Dredging - Development
Streambank Destabilization - Dev.

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 2 Scheduled Monitoring: 2007

Dry Run, East Branch Polk Run, and an unnamed tributary to Sycamore Creek were included on the 1998 303(d) list based on data collected in 1991. Since these data are no longer current (i.e., more than 10 years old), reassessment of current conditions is warranted. However, recognizing the continued pervasive impacts related to sewer line construction within stream channels, retaining the Assessment Unit on the 303(d) list is appropriate. Limited additional data collected in 1994

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05090203 020	Ohio River tributaries (downstream Little Miami R. to upstream Great Miami R.); excluding Mill Creek	48.6

Aquatic Life Use Assessment

Sampling Year(s): 1991, 1994

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): WWH,LRW

# Sites Sampled:	<5	5-20	20-50	>50
	1	3	0	0

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	16.7	0.0	83.3
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.17	0.00	0.83

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
8.1	0.0	40.5

High Magnitude Causes

Unionized Ammonia
Organic Enrichment/DO
Flow Alteration
Direct Habitat Alterations

High Magnitude Sources

Combined Sewer Overflows
Dredging - Development
Streambank Destabilization - Dev.
Natural

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 1 Scheduled Monitoring: 2011

Muddy Creek, Rapid Run and Wulff Run were included on the 1998 303(d) list based on data from 1991. Since these data are no longer current (i.e., more than 10 years old), reassessment of current conditions is warranted. However, recognizing the continued pervasive impacts related to sewer line construction within stream channels, retaining the Assessment Unit on the 303(d) list is appropriate. Limited additional data collected in 1994 were used to supplement the assessment of this AU.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05090203 050	Ohio River tributaries (downstream Great Miami River to upstream Wolper Creek [KY])	0.1

Aquatic Life Use Assessment

Sampling Year(s):

Sampling Site Size Distribution (mi2)

Aquatic Life Use(s): WWH

# Sites Sampled:	<5	5-20	20-50	>50
	0	0	0	0

Impairment? Unknown

% Attainment

Full	Partial	Non
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Small Streams (sites w/<50 mi2 drainage):

0.0	0.0	0.0
-----	-----	-----

Large Streams/Rivers (sites w/>50 mi2 drainage):

0.0	0.0	0.0
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AU Score
(relative amount of attainment)

Full	Partial	Non
0.00	0.00	0.00

High Magnitude Causes

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.0	0.0	0.0

High Magnitude Sources

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria:

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations:

Total # Bacteria Sites in AU: 0

Other:

Impairment? Unknown

Fish Consumption Assessment

Integrated Report Assessment Category: 3

Priority:

Scheduled Monitoring: 2010

This is a very small watershed within Ohio (only 39 acres).

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05120101 010	Wabash River (headwaters to upstream Beaver Creek)	115.9

Aquatic Life Use Assessment

Sampling Year(s): 1999

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH				
# Sites Sampled:	5	7	2	6

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	8.6	25.0	66.4
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	89.0	11.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.04	0.57	0.39

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
5.0	66.1	44.8

High Magnitude Causes

Other Habitat Alterations

High Magnitude Sources

Minor Municipal Point Source
Nonirrigated Crop Production
Confined Animal Feeding Operations (NPS)
Channelization - Agriculture
Removal of Riparian Vegetation - Ag.
Streambank Destabilization - Ag.

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion
>5000 colonies/100 ml. fecal coliform bacteria: 25

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 17

Total # Bacteria Sites in AU: 28

Other:

Impairment? Yes

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 8 Scheduled Monitoring: 2010

Development of a TMDL for aquatic life, prepared by the USEPA, will begin in 2003 for the Wabash River. Monitoring in support of the TMDL was conducted by the Ohio EPA in 1999.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05120101 020	Beaver Creek (Grand Lake St. Marys and tributaries)	112.5

Aquatic Life Use Assessment

Sampling Year(s): 1999

Sampling Year(s): 1999	Sampling Site Size Distribution (mi2)				
	<5	5-20	20-50	>50	
Aquatic Life Use(s): WWH	# Sites Sampled:	2	11	0	0

Impairment? Yes

		% Attainment		
		Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):		0.0	27.3	72.7
Large Streams/Rivers (sites w/>50 mi2 drainage):		0.0	0.0	0.0

AU Score (relative amount of attainment)		
Full	Partial	Non
0.00	0.27	0.73

Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non
0.0	30.7	81.8

High Magnitude Causes

Other Habitat Alterations

High Magnitude Sources

Nonirrigated Crop Production
Confined Animal Feeding Operations (NPS)
Channelization - Agriculture
Removal of Riparian Vegetation - Ag.
Streambank Destabilization - Ag.

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 9

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 7

Total # Bacteria Sites in AU: 10

Other:

Impairment? Yes

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 8 Scheduled Monitoring: 2010

Monitoring to characterize physical, chemical, and biological condition of the Beaver Creek watershed was incorporated in the Wabash River basin intensive survey conducted in 1999.

Ohio EPA 2002 Integrated Report Appendix C Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05120101 030	Beaver Creek (downstream Grand Lake St. Marys Dam to mouth)	58.6

Aquatic Life Use Assessment

Sampling Year(s): 1999

Sampling Site Size Distribution (mi2)

	<5	5-20	20-50	>50
Aquatic Life Use(s): WWH				
# Sites Sampled:	3	2	0	4

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	41.7	25.0	33.3
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	100.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.21	0.12	0.67

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
12.2	7.3	39.1

High Magnitude Causes

Other Habitat Alterations

High Magnitude Sources

Nonirrigated Crop Production
Confined Animal Feeding Operations (NPS)
Channelization - Agriculture
Removal of Riparian Vegetation - Ag.
Streambank Destabilization - Ag.

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 3

>576 colonies/100 ml. E. coli bacteria:

Sites in AU w/ Bacteria Violations: 2

Total # Bacteria Sites in AU: 11

Other:

Impairment? Indeterminate

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 1 Scheduled Monitoring: 2010

Monitoring to characterize physical, chemical, and biological condition of the Beaver Creek watershed was incorporated in the Wabash River basin intensive survey conducted in 1999.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05120101 040	Wabash River (downstream Beaver Creek to upstream Loblolly Creek [IN])	12.6

Aquatic Life Use Assessment

Sampling Year(s): 1999

Sampling Site Size Distribution (mi2)

		<5	5-20	20-50	>50
Aquatic Life Use(s): WWH,MWH-C	# Sites Sampled:	0	1	0	1

Impairment? Yes

% Attainment

	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	0.0	100.0	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	100.0

AU Score
(relative amount of attainment)

Full	Partial	Non
0.00	0.50	0.50

Weighted AU Score
(relative amount of attainment weighted by AU size)

Full	Partial	Non
0.0	6.3	6.3

High Magnitude Causes

Other Habitat Alterations

High Magnitude Sources

Nonirrigated Crop Production
Confined Animal Feeding Operations (NPS)
Channelization - Agriculture
Removal of Riparian Vegetation - Ag.
Streambank Destabilization - Ag.

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 2

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 2

Total # Bacteria Sites in AU: 2

Other:

Impairment? Indeterminate

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 2 Scheduled Monitoring: 2010

Development of a TMDL for aquatic life, prepared by the USEPA, will begin in 2003 for the Wabash River. Monitoring in support of the TMDL was conducted by the Ohio EPA in 1999.

Ohio EPA 2002 Integrated Report Appendix C

Assessment Unit (AU) Summaries

HUC11	AU Description	AU Size (mi2)
05120103 010	Mississinewa River (headwaters to downstream Mud Creek [IN])	30.3

Aquatic Life Use Assessment

Sampling Year(s): 1999

Aquatic Life Use(s): WWH,MWH-C	# Sites Sampled:	Sampling Site Size Distribution (mi2)			
		<5	5-20	20-50	>50
		3	2	1	0

Impairment? Yes

	% Attainment		
	Full	Partial	Non
Small Streams (sites w/<50 mi2 drainage):	62.5	37.5	0.0
Large Streams/Rivers (sites w/>50 mi2 drainage):	0.0	0.0	0.0

AU Score (relative amount of attainment)		
Full	Partial	Non
0.63	0.37	0.00

Weighted AU Score (relative amount of attainment weighted by AU size)		
Full	Partial	Non
18.9	11.4	0.0

High Magnitude Causes

Other Habitat Alterations

High Magnitude Sources

Nonirrigated Crop Production
 Confined Animal Feeding Operations (NPS)
 Channelization - Agriculture
 Removal of Riparian Vegetation - Ag.
 Streambank Destabilization - Ag.

Recreation Use Assessment

of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion

>5000 colonies/100 ml. fecal coliform bacteria: 3

>576 colonies/100 ml. E. coli bacteria):

Sites in AU w/ Bacteria Violations: 2

Total # Bacteria Sites in AU: 6

Other:

Impairment? Indeterminate

Fish Consumption Assessment

Integrated Report Assessment Category: 5 Priority: 4 Scheduled Monitoring: 2010

This is a very small watershed within Ohio. Monitoring to characterize physical, chemical, and biological condition was incorporated in the Wabash River basin intensive survey conducted in 1999.